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APPENDIX TO THE JOURNALS
OF THE
SENATE AND ASSEMBLY

OF THE
THIRTIETH SESSION
OF THE
LEGISLATURE OF THE STATE OF CALIFORNIA.

VOLUME V.

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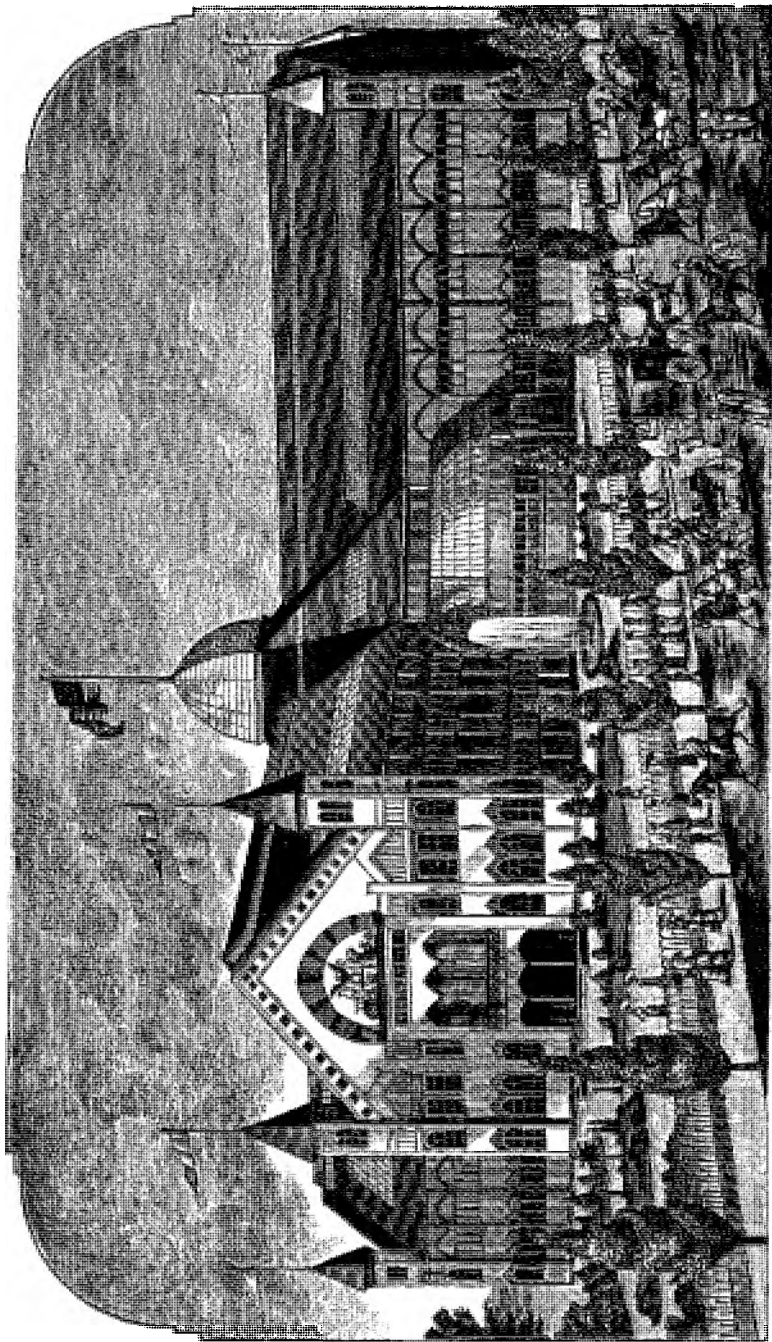
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STATE AGRICULTURAL AND INDUSTRIAL EXPOSITION BUILDING.

TRANSACTIONS

OF THE

CALIFORNIA

STATE AGRICULTURAL SOCIETY

DURING THE YEAR 1890.



SACRAMENTO:

STATE OFFICE, : : : : A. J. JOHNSTON, SUPT. STATE PRINTING.
1891.

THE BOARD OF AGRICULTURE FOR 1890.

DIRECTORS.

JE	Stockton.
TARY	San José.
N	San Francisco.
	Princeton, Colusa County.
	San Francisco.
E	Sacramento.
ER GREEN	Sacramento.
ER	Salinas, Monterey County.
	Novato, Marin County.
OCK	Sacramento.
COX	Sacramento.
RD	Chino, San Bernardino County.

OFFICERS OF THE BOARD.

	PRESIDENT,	
ER GREEN		Sacramento.
	SECRETARY,	
MITH		Sacramento.
	TREASURER,	
		Sacramento.
	SUPERINTENDENT OF PARK,	
OCK		Sacramento.
	SUPERINTENDENT OF PAVILION,	
JE		Sacramento.

STATE AGRICULTURAL SOCIETY.

AN ACT

TO PROVIDE FOR THE MANAGEMENT AND CONTROL OF THE STATE AGRICULTURAL SOCIETY BY THE STATE.

[Approved April 15, 1880.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. The State Agricultural Society is hereby declared a State institution.

SEC. 2. Within ten days after the passage of this Act, the Governor shall appoint twelve resident citizens of the State, who shall, when organized, constitute a State Board of Agriculture, who shall, except as hereinafter provided, hold office for the term of four years, and until their successors are appointed and qualified. Vacancies occurring from any cause in the Board shall be filled by appointment of the Governor for the unexpired term of the office vacated.

SEC. 3. Within ten days after their appointment, the persons so appointed shall qualify as required by the Constitution, and shall meet at the office of the State Agricultural Society, and organize by the election of one of their number as President of the Board and said society, who shall hold said office of President for the term of one year, and until his successor is elected and qualified. The Board shall also elect a Secretary and Treasurer, not of their number, who shall each hold office at the discretion of the Board.

SEC. 4. At the same meeting the members of the Board shall, by lot or otherwise, classify themselves into four classes of three members each. The term of office of the first class shall expire at the end of the first fiscal year; of the second class, of the second year; of the third class, of the third year; of the fourth class, at the end of the full term of four years. The fiscal year shall be from the first of February to the first of February.

SEC. 5. The State Board of Agriculture shall be charged with the exclusive management and control of the State Agricultural Society as a State institution; shall have possession and care of its property, and be intrusted with the direction of its entire business and financial affairs. They shall define the duties of the Secretary and Treasurer, fix their bonds and compensation, and shall have power to make all necessary changes in the constitution and rules of the society, to adapt the same to the provisions of this Act, and to the management of the society, its meetings and exhibitions. They shall provide for an annual fair or exhibition by the society of all the industries and industrial products of the State, at the city of Sacramento; *provided*, that in no event shall the State be liable for any premium awarded or debt created by said Board of Agriculture.

SEC. 6. The Board shall have power to appoint all necessary Marshals and police to keep order and preserve peace at the annual Fairs of the society; and the officers so appointed shall be vested with the same authority for the preservation of order and peace, on the grounds and in the buildings of the society, that executive peace officers are vested with by law.

SEC. 7. Said Board shall use all suitable means to collect and disseminate all kinds of information calculated to educate and benefit the industrial classes, develop the resources, and advance the material interests of the State, and shall, on or before the first day of February of each year, report to the Governor a full and detailed account of their transactions, statistics, and information gained, and also a full financial statement of all funds received and disbursed. They shall also make such suggestions and recommendations as experience and good policy may dictate to the improvement and advancement of the agricultural and kindred industries.

SEC. 8. The Superintendent of State Printing shall, each year, print and bind in cloth, four thousand volumes of said transactions, and deliver the same to said Board of Agriculture for distribution and exchange. He shall also do such job printing as said Board may require to carry out the provisions of this Act.

SEC. 9. The Directors or Board of Managers of each county and district agricultural society or association, and of county, district, or State horticultural and stock breeding association or society, organized and acting under the laws of this State, shall report annually, on or before the first day of April, to the State Board of Agriculture, the name and Post Office address of each officer of such society or association; and, on or before the first day of December, shall report to the Board of Agriculture the transactions of said society, including the premiums offered, the list of stock and articles exhibited, and the premiums paid; the amount of receipts and expenditures for the year, the new industries inaugurated, and any and all facts and statistics showing the development and

of the industries, products, and resources of the country or district embraced the management of such society or association; *provided*, that the provisions of it shall not apply to any Board of Commissioners or other body organized under laws of this State, the object of which is to promote vinicultural industries, unless such board or body shall voluntarily request the privilege of making such reports as are required by this Act, in which case this Board or body shall enjoy equal privileges as are accorded to other institutions devoted to agriculture.

6. To facilitate such reports, the State Board of Agriculture shall have prepared, and shall furnish such societies with necessary schedules and blanks for such reports, and the State Board shall include such reports from societies and associations, or so far thereof as they may deem advisable, in their report to the Governor.

1. When said State Board of Agriculture shall have been organized and classified as provided herein, the Secretary of the Board shall report such organization and action to the Governor. He shall also report any vacancy that may occur in said Board at any time.

2. All laws and parts of laws in conflict with this Act are hereby repealed.

3. This Act shall take effect and be in force from and after its passage.

CONSTITUTION

OF THE

CALIFORNIA STATE AGRICULTURAL SOCIETY.

[Revised and adopted by the State Board of Agriculture, April 20, 1886.]

NAME.

SECTION 1. This society shall be called "The California State Agricultural Society."

OBJECT.

SEC. 2. It shall be the object of this society to encourage the cultivation of the soil, and the general development of all the agricultural resources of this State.

SEC. 3. To foster every branch of mechanical and household arts calculated to increase the comforts of home life.

SEC. 4. To extend and facilitate the various branches of mining and mining interest.

MEMBERSHIP.

SEC. 5. *Annual Members*.—Any person who shall pay into the funds of this society the sum of five dollars may become a member of the same; such membership to expire at the end of the current fiscal year.

SEC. 6. *Life Members*.—Any person may become a member for life by the payment of fifty dollars; or, if already a member, by the payment of forty-five dollars, or by serving a full term as a member of the State Board of Agriculture, and shall thereafter be exempt from all dues and assessments.

SEC. 7. *Honorary and Corresponding Members*.—Any person whom the Board shall propose may be elected an honorary or corresponding member, and shall enjoy, free of charge, all the privileges of the society, except voting and holding office.

SEC. 8. *Privileges of Members*.—Any citizen of this State being a life member of this society, shall be furnished with a personal badge for his separate use, which shall entitle him to admission to all the exhibitions of the society, the quarter-stretch, the Grand Stand at Park, during his lifetime, and a separate ticket for the use of his wife and minor children only, which will entitle them to admissions to all the exhibitions of the society, each day, as follows: a coupon for the Park (morning), a coupon for the Park (afternoon), a coupon for Pavilion (afternoon and evening), and shall be permitted to compete for premiums in any and all departments.

Annual members will be furnished with a ticket that will entitle him, accompanied by a lady, and one child under fifteen years of age, or, if purchased in the name of a lady, will admit the owner and lady, and one child under fifteen years of age, twice daily at Park and Pavilion, and permission to compete for premiums in any and all departments.

SEC. 9. *Expulsion of Members*.—Any member who shall present for exhibition any article or animal which he is not entitled by the rules of the society to exhibit, or who shall attempt to deceive, or be guilty of a breach of good faith toward the society, may be expelled by a vote of two thirds of the members present at any meeting of the Board; *provided, always*, that no member shall be expelled unless written notice of the alleged offense shall have been served on him, or left at his usual place of residence at least twenty days previous to the action.

OFFICERS.

SEC. 10. The officers of this society shall consist of twelve Directors, to be appointed by the Governor, who shall constitute a State Board of Agriculture, seven of whom shall constitute a quorum. The Board shall be charged with the exclusive management and control of the State Agricultural Society as a State institution; shall have possession and care of its property, and be intrusted with the direction of its entire business and financial affairs; shall have power to make all necessary changes in the constitution and rules of the society; shall provide for an annual fair or exhibition by the society of all the industries and industrial products of the State, at the city of Sacramento, and such other exhibition as they may deem important. They shall elect one of their members as President of the Board and society, and a Treasurer and Secretary, not members of the Board. They may also appoint, annually, as officers of the Board, a chemist, a botanist, a miner-

t, a geologist, a metallurgist, an ornithologist, and an entomologist, and define the of each. They may appoint such committees on the various departments of agriculture, mining, and manufactures, either generally or for specific purposes, as they may important for the best interests of the State, and require such committees to report sult of their investigations to the Board at such times as may be named by them.

11. *Duties of President.*—The President shall preside at all meetings of the Board of the society; shall have power to call special meetings of the Board when necessary and at the written request of ten members may call extra meetings of the society; appoint all meetings not otherwise provided for; and shall sign all financial and documents emanating from the society, and not otherwise provided for. In the absence of the President from any meeting of the Board or society, any Director may be to the chair, and, during such meeting, and for the completion of any business acted, or ordered at the same, shall have the same powers as the President.

12. *Duties of Secretary.*—The Secretary shall conduct the correspondence of the Board or society, keeping copies of all important letters written in the name or on behalf of the Board or society, holding the same free to the inspection of any member of the Board or society, at any regular meeting of the same. He shall also receive and file all addressed to the Board or society, holding the same subject to the Board of Directors. He shall attend all meetings of the society and the Board, keeping a full record of proceedings of each in a book for that purpose. He shall prepare and publish all reports of meetings, shall keep a roll of standing committees, and call the same (notices) whenever desired to do so by the Chair; shall sign all certificates for honorary membership and life memberships, and forward the same to those entitled to receive the same.

He shall keep, in a book prepared for that purpose, the name and address of every member; shall prepare and sign all gratuitous or complimentary cards or tickets of admission; shall countersign all diplomas, certificates of merit, etc., awarded by the Board, and forward the same to their respective claimants. He shall be ex officio Librarian; shall have the seal and all the plates, dies, engravings, etc., belonging to the society, and shall be struck therefrom such medals and impressions as may, from time to time, be ordered. He shall have charge of all specimens, models, plants, seeds, books, etc., and shall receive, prepare, or distribute the same under the direction of the Board. He shall prepare all reports to be made by the Board to the society, and to the State. He shall receive all moneys due or payable to the society, and pay the same to the Treasurer, taking his receipt therefor; shall hold all bonds filed by officers of the society, for the faithful performance of their duty, and all vouchers for every class of expenditure. He shall count all drafts ordered by the Board, and all certificates of annual and life membership, keep an account of the same in a book as they are issued, and shall, in December of each year, prepare a tabular statement of the receipts and expenditures of the Board, and forward the same to the law organizing the same.

13. *Duties of the Treasurer.*—The Treasurer shall receipt for all funds at the hands of the Secretary, and shall disburse the same only on the order of the Board, attested by the President and the Secretary. He shall also hold in trust all certificates of stock, and transfer, invest, or dispose of the same only by direction of the Board. He shall file with the Secretary a bond for the faithful performance of his duties, said bond to be approved by the Board, and shall, at the annual meeting, make to the society a detailed report of all his transactions.

STANDING COMMITTEES.

14. *Committee of Finance.*—The Committee of Finance shall consist of five members of the Board, the President being one, whose duty it shall be to audit the Secretary's and Treasurer's accounts, to examine and approve all bills before they are paid, to have general supervision of the finances of the society, and to report their transactions and financial condition of the society in full to the Board whenever called on so to do.

15. *Library Committee.*—The Library Committee shall consist of four members of the Board, and the Secretary, whose duty it shall be to have the general supervision of the library and cabinet, and make all necessary rules and regulations for the government of the same (said rules and regulations being subject to the approval of the Board), to suggest such means for the safe-keeping and enlargement of both the library and cabinet as may seem expedient, and to make a full report of their transactions, together with a statement of the department under their charge, at each annual meeting.

16. *Visiting Committee.*—The Visiting Committee, to be appointed by the Board, shall consist of five members, whose duty it shall be to visit and examine all farms, orchards, vineyards, nurseries, crops, irrigating works, agricultural machine works, agricultural machinery in operation, etc., which may be entered for competition, and which require examination at other places than the annual fair; to award premiums for the same according to the rules, and to recommend such gratuities as they may deem proper, and make a full report to the Board at least one day previous to the annual fair.

17. *Printing and Publication Committee.*—The Committee on Printing and Publication shall consist of five (the President and Secretary being two), whose duty it shall be to contract for and superintend, under the direction of the Board, all printing and publication necessary for the society.

OFFICE AND ROOMS.

18. The office, rooms, library, and cabinet of the Board and society shall be permanently located at the capital of the State.

LAWS RELATING TO DISTRICT AGRICULTURAL ASSOCIATIONS.

AN ACT

TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE ORGANIZATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME BY THE STATE.

[Approved April 15, 1880.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. The counties of Alameda, Contra Costa, and San Francisco shall constitute Agricultural District No. 1.

SEC. 2. The counties of San Joaquin, Calaveras, Fresno, Kern, Merced, Mariposa, Stanislaus, Tulare, and Tuolumne shall constitute Agricultural District No. 2.

SEC. 3. The counties of Sutter, Yuba, Butte, Colusa, Tehama, Yolo, and Sacramento shall constitute Agricultural District No. 3.

SEC. 4. The counties of Sonoma, Marin, Solano, Napa, and Lake shall constitute Agricultural District No. 4.

SEC. 5. The counties of Santa Clara and San Mateo shall constitute Agricultural District No. 5.

SEC. 6. The counties of Los Angeles, San Diego, San Bernardino, Santa Barbara, Ventura, and Inyo shall constitute Agricultural District No. 6.

SEC. 7. The counties of Monterey, Santa Cruz, San Luis Obispo, and San Benito shall constitute Agricultural District No. 7.

SEC. 8. The counties of Nevada, Placer, El Dorado, Amador, Alpine, and Mono shall constitute Agricultural District No. 8.

SEC. 9. The counties of Mendocino, Humboldt, and Del Norte shall constitute Agricultural District No. 9.

SEC. 10. The counties of Siskiyou, Trinity, and Shasta shall constitute Agricultural District No. 10.

SEC. 11. The counties of Plumas, Lassen, Modoc, and Sierra shall constitute Agricultural District No. 11.

SEC. 12. Any fifty or more persons representing a majority of the counties within any one of the districts above constituted may form an association for the improvement of the material industries within such district, and when so formed the association shall be known and designated by the name of ——— Agricultural Association, and by such name and style shall have perpetual succession, and shall have power and authority to contract and be contracted with, to sue and be sued, to have and use a common seal, to purchase and hold and lease real estate, with such buildings and improvements as may be erected thereon, and may sell and lease and dispose of the same at pleasure. The said real estate shall be used by such association for the purpose of holding exhibitions of horses, cattle, and other stock, of the agricultural, horticultural, viticultural, mechanical, manufacturing, and domestic products of such district, with view to the improvement of all the industries in the same.

SEC. 13. The officers of such association shall consist of eight Directors, who shall constitute a District Board of Agriculture for District Number ———; a President, who shall be one of their number; and a Secretary and Treasurer, not of their number.

SEC. 14. Within ten days after the formation of an agricultural association within any of the districts above constituted, in accordance with the provisions of this Act, and notice of such formation to the Governor, the Governor shall appoint eight resident citizens of such district as members of a District Board of Agriculture for said district, whose term of office shall be four years, except as hereinafter provided.

SEC. 15. Within ten days after their appointment, the persons so appointed shall qualify, as required by the Constitution, and shall meet at a place within the district, and organize by the election of one of their number President of the Board and association, who shall hold said office of President one year, and until his successor is elected; they shall also elect a Secretary and Treasurer.

SEC. 16. At the same meeting the members of the Board shall, by lot or otherwise, classify themselves into four classes of two members each. The terms of office of the first class shall expire at the end of the first fiscal year; of the second class, of the second fiscal year; of the third class, of the third fiscal year; and of the fourth class, at the end of the full term of four years. The fiscal year shall be from December first to December first.

17. Each association so formed and organized is hereby declared and shall be organized as a State institution, and the Board so appointed and qualified shall have the sole control and management of such institution for and in the name of the State, shall have the possession and care of all the property of the association, and shall fix the terms of office, and the bonds of the Secretary and Treasurer, and determine their duties and powers. They shall have power to make all necessary by-laws, rules, and regulations for the government of the association and the management of its prudential financial affairs. They shall provide for an annual fair or exhibition by the association of all the industries and industrial products in the district, at such time and place as may seem advisable; *provided*, that no District Fair shall be held in any of the districts at the same time of the State Fair; and *provided further*, that the State shall in no event be liable for any premium offered, or award, or for any debt contracted by any District Board of Agriculture or Agricultural Association.

18. When any District Board of Agriculture shall have been classified and organized as herein provided, the Secretary of the Board shall report such classification and organization to the State Board of Agriculture; he shall also report the same to the Governor, and shall report any vacancy that may occur in the Board to the Governor, who shall fill the same by appointment for the unexpired term.

19. All laws and parts of laws in conflict with this Act are hereby repealed.

20. This Act shall take effect from and after its passage.

AN ACT

TO AMEND SECTIONS THREE, FOUR, NINE, AND ELEVEN OF AN ACT ENTITLED "AN ACT TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE ORGANIZATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME BY THE STATE," APPROVED APRIL 15, 1880, SO AS TO CREATE TWO ADDITIONAL DISTRICTS.

[Approved March 6, 1883.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section three of the Act of which this is amendatory, entitled "An Act to form agricultural districts, to provide for the organization of agricultural associations therein, and for the management and control of the same by the State," approved April fifteenth, eighteen hundred and eighty, is amended to read as follows:

SECTION 3. The counties of Butte, Colusa, and Tehama shall constitute Agricultural District Number Three.

SECTION 4. Section four of said Act is amended to read as follows:

SECTION 4. The counties of Sonoma, Marin, Solano, and Napa shall constitute Agricultural District Number Four.

SECTION 9. Section nine of said Act is amended to read as follows:

SECTION 9. The counties of Humboldt and Del Norte shall constitute Agricultural District Number Nine.

SECTION 11. Section eleven of said Act is amended so as to read as follows:

SECTION 11. The counties of Plumas, Lassen, Modoc, and Sierra shall constitute Agricultural District Number Eleven. The counties of Mendocino and Lake shall constitute Agricultural District Number Twelve; and the counties of Sacramento, Yolo, Yuba, and Colusa shall constitute Agricultural District Number Thirteen.

SECTION 5. This Act shall take effect immediately.

AN ACT

TO AMEND AN ACT ENTITLED "AN ACT TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE ORGANIZATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME BY THE STATE," APPROVED APRIL 15, 1880.

[Approved March 9, 1885.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section eighteen of said Act is hereby amended so as to read as follows: SECTION 18. When any District Board of Agriculture shall have been classified and organized as herein provided, the Secretary of the Board shall report such classification and organization to the State Board of Agriculture. He shall also report the same to the

Governor, and shall report any vacancy that may occur in the Board to the Governor, who shall fill the same by appointment for the unexpired term. The Governor shall have the power and authority to remove a Director at any time for good and sufficient cause, and to appoint a Director to fill the vacancy.

SEC. 2. This Act shall take effect immediately.

AN ACT

TO AMEND SECTION EIGHT OF AN ACT ENTITLED "AN ACT TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE ORGANIZATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME BY THE STATE," APPROVED APRIL 15, 1880.

[Approved March 14, 1885.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section eight of the Act recited in the title hereto is amended so as to read as follows:

SECTION 8. The counties of Nevada and Placer shall constitute Agricultural District Number Seventeen; and the counties of Alpine, Amador, El Dorado, and Mono shall constitute Agricultural District Number Eight. And the sum of three thousand dollars is hereby appropriated out of any money in the State Treasury not otherwise appropriated, for the aid of District Agricultural Society Number Seventeen, to be audited and paid the same as appropriations for other district agricultural societies.

SEC. 2. This Act shall take effect immediately.

AN ACT

TO AMEND SECTIONS TWO, FOUR, SIX, SEVEN, AND EIGHT OF AN ACT ENTITLED "AN ACT TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE ORGANIZATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME BY THE STATE," APPROVED APRIL 15, 1880, SO AS TO CREATE CERTAIN ADDITIONAL DISTRICTS.

[Approved March 9, 1887.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. Sections two, four, six, seven, and eight of an Act entitled "An Act to form agricultural districts, to provide for the organization of agricultural associations therein, and for the management and control of the same by the State," approved April fifteenth, eighteen hundred and eighty, is hereby amended so as to read as follows:

SECTION 2. The counties of San Joaquin, Merced, Stanislaus, and Tuolumne shall constitute Agricultural District Number Two; the counties of Tulare and Kern shall constitute Agricultural District Number Fifteen; the counties of Merced, Mariposa, and Fresno shall constitute Agricultural District Number Twenty-one.

SECTION 4. The counties of Sonoma and Marin shall constitute Agricultural District Number Four; and the counties of Solano and Napa shall constitute Agricultural District Number Twenty-five; the counties of Los Angeles, San Bernardino, and Ventura shall constitute Agricultural District Number Six; and the county of Santa Barbara shall constitute Agricultural District Number Nineteen.

SECTION 7. The counties of Monterey and San Benito shall constitute Agricultural District Number Seven; the county of Santa Cruz shall constitute Agricultural District Number Fourteen; the county of San Luis Obispo shall constitute Agricultural District Number Sixteen.

SECTION 8. The counties of Nevada and Placer shall constitute Agricultural District Number Seventeen; and the county of El Dorado shall constitute Agricultural District Number Eight; the counties of Alpine, Inyo, and Mono shall constitute Agricultural District Number Eighteen; the counties of Amador and Calaveras shall constitute Agricultural District Number Twenty-six.

SEC. 2. This Act shall take effect immediately.

SEC. 3. All Acts and parts of Acts in conflict with this Act are hereby repealed.

AN ACT

MEND SECTION ONE, TO REPEAL SECTIONS TWO, THREE, FOUR, FIVE, IX, SEVEN, EIGHT, NINE, TEN, AND ELEVEN, AND TO RENUMBER SECTIONS TWELVE, THIRTEEN, FOURTEEN, FIFTEEN, SIXTEEN, SEVENTEEN, EIGHTEEN, AND NINETEEN OF AN ACT ENTITLED "AN ACT TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE ORGANIZATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME," APPROVED APRIL 15, 1880, AMENDED MARCH 6, 1883, AMENDED MARCH 9, 1885, AMENDED MARCH 14, 1885, AMENDED MARCH 9, 1887, TO REPEAL ALL LAWS AMENDATORY THEREOF, AND TO PROVIDE FOR THE REORGANIZATION OF EXISTING DISTRICTS AND THE FORMATION OF NEW DISTRICTS.

[Approved March 6, 1889.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

- SECTION 1. Section one of said Act is hereby amended so as to read as follows:
- SECTION 1. The several counties of this State divided and classified into agricultural districts and numbered as follows, to wit: The counties of San Francisco and Alameda shall constitute Agricultural District No. 1. The counties of San Joaquin and Stanislaus shall constitute Agricultural District No. 2. The counties of Butte, Tehama, and Colusa shall constitute Agricultural District No. 3. The counties of Sonoma and Marin shall constitute Agricultural District No. 4. The counties of San Mateo and Santa Clara shall constitute Agricultural District No. 5. The counties of Los Angeles and Ventura shall constitute Agricultural District No. 6. The counties of Monterey and San Benito shall constitute Agricultural District No. 7. The county of El Dorado shall constitute Agricultural District No. 8. The counties of Del Norte and Humboldt shall constitute Agricultural District No. 9. The counties of Siskiyou and Trinity shall constitute Agricultural District No. 10. The counties of Plumas, Sierra, Lassen, and Modoc shall constitute Agricultural District No. 11. The counties of Lake and Mendocino shall constitute Agricultural District No. 12. The counties of Sutter, Yolo, and Yuba shall constitute Agricultural District No. 13. The county of Santa Cruz, save and except that part thereof southeast of a line beginning at a point where the Aptos Creek empties into the bay of Monterey and extending directly northeast to the boundary line of Santa Clara County, shall constitute Agricultural District No. 14. The counties of Tulare and Kern shall constitute Agricultural District No. 15. The county of San Luis Obispo shall constitute Agricultural District No. 16. The county of Nevada shall constitute Agricultural District No. 17. The counties of Alpine, Mono, and Inyo shall constitute Agricultural District No. 18. The county of Santa Barbara shall constitute Agricultural District No. 19. The county of Santa Cruz shall constitute Agricultural District No. 20. The counties of Merced, Mariposa, Fresno shall constitute Agricultural District No. 21. The county of San Diego shall constitute Agricultural District No. 22. The county of Contra Costa shall constitute Agricultural District No. 23. All that part of Santa Cruz County southeast of a line beginning at a point where the Aptos Creek empties into the bay of Monterey, and extending in a direct line northeast to the boundary line of Santa Clara County, shall constitute Agricultural District No. 24. The counties of Solano and Napa shall constitute Agricultural District No. 25. The counties of Sacramento and Amador shall constitute Agricultural District No. 26. The county of Shasta shall constitute Agricultural District No. 27. The county of San Bernardino shall constitute Agricultural District No. 28. The counties of Calaveras and Tuolumne shall constitute Agricultural District No. 29.
2. Sections two, three, four, five, six, seven, eight, nine, ten, and eleven of said Act are hereby repealed.
3. Sections twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, and twenty are hereby renumbered as follows, respectively, to wit: Section twelve is hereby numbered two, section thirteen is hereby numbered three, section fourteen is hereby numbered four, section fifteen is hereby numbered five, section sixteen is hereby numbered six, section seventeen is hereby numbered seven, section eighteen is hereby numbered eight, section nineteen is hereby numbered nine, and section twenty is hereby numbered ten.
4. All laws amendatory of "An Act to form agricultural districts, to provide for the organization of agricultural associations therein, and for the management and control of the same," approved April fifteenth, eighteen hundred and eighty, and all laws or parts thereof in conflict with this Act, are hereby repealed.
5. This Act shall take effect and be in force from and after its passage.

AN ACT

TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE FORMATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME BY THE STATE, AND TO REPEAL SO MUCH OF AN ACT ENTITLED "AN ACT TO FORM AGRICULTURAL DISTRICTS, TO PROVIDE FOR THE FORMATION OF AGRICULTURAL ASSOCIATIONS THEREIN, AND FOR THE MANAGEMENT AND CONTROL OF THE SAME BY THE STATE," APPROVED APRIL 15, 1880, AND OF ALL ACTS AMENDATORY THEREOF, AS ARE IN CONFLICT HERewith.

[Approved March 20, 1891.]

The People of the State of California, represented in Senate and Assembly, do enact as follows:

- SECTION 1. The several counties of this State are divided and classified into agricultural districts, and numbered as follows, to wit: The counties of San Francisco and Alameda shall constitute Agricultural District No. 1. The counties of San Joaquin and Calaveras shall constitute Agricultural District No. 2. The counties of Butte and Colusa shall constitute Agricultural District No. 3. The counties of Sonoma and Marin shall constitute Agricultural District No. 4. The counties of San Mateo and Santa Clara shall constitute Agricultural District No. 5. The county of Los Angeles shall constitute Agricultural District No. 6. The county of Monterey shall constitute Agricultural District No. 7. The county of El Dorado shall constitute Agricultural District No. 8. The counties of Del Norte and Humboldt shall constitute Agricultural District No. 9. The counties of Siskiyou and Trinity shall constitute Agricultural District No. 10. The counties of Plumas and Sierra shall constitute Agricultural District No. 11. The counties of Lake and Mendocino shall constitute Agricultural District No. 12. The counties of Sutter, Yolo, and Yuba shall constitute Agricultural District No. 13. The county of Santa Cruz, save and except that part thereof southeast of the line beginning at a point where the Aptos Creek empties into the bay of Monterey, and extending directly northeast to the boundary line of Santa Clara County, shall constitute Agricultural District No. 14. The counties of Tulare and Kern shall constitute Agricultural District No. 15. The county of San Luis Obispo shall constitute Agricultural District No. 16. The county of Nevada shall constitute Agricultural District No. 17. The counties of Alpine, Mono, and Inyo shall constitute Agricultural District No. 18. All that portion of Santa Barbara County lying east of the Gaviota and south of the Santa Ynez Mountains shall constitute Agricultural District No. 19. The county of Placer shall constitute Agricultural District No. 20. The county of Fresno shall constitute Agricultural District No. 21. The county of San Diego shall constitute Agricultural District No. 22. The county of Contra Costa shall constitute Agricultural District No. 23. All that part of Santa Cruz County southeast of a line beginning at a point where the Aptos Creek empties into the bay of Monterey, and extending in a direct line northeast to the boundary line of Santa Clara County, shall constitute Agricultural District No. 24. The county of Napa shall constitute Agricultural District No. 25. The counties of Sacramento and Amador shall constitute Agricultural District No. 26. The county of Shasta shall constitute Agricultural District No. 27. The county of San Bernardino shall constitute Agricultural District No. 28. The county of Tuolumne shall constitute Agricultural District No. 29. The county of Tehama shall constitute Agricultural District No. 30. The county of Ventura shall constitute Agricultural District No. 31. The county of Orange shall constitute Agricultural District No. 32. The county of San Benito shall constitute Agricultural District No. 33. The counties of Modoc and Lassen shall constitute Agricultural District No. 34. The counties of Merced and Mariposa shall constitute Agricultural District No. 35. The county of Solano shall constitute Agricultural District No. 36. All that portion of Santa Barbara County not included in Agricultural District No. 19 shall constitute Agricultural District No. 37. The county of Stanislaus shall constitute Agricultural District No. 38.
- SEC. 2. Where two or more counties shall constitute an agricultural district, each county shall be represented in the District Board of Directors by at least two resident citizens as Directors in said Board; *provided*, that when, by reason of the formation of a new agricultural district, a Director of one district becomes a resident of another, his term of office as Director will expire in sixty days after the formation of the new agricultural district. Whenever the Boards of Directors of two or more agricultural districts shall, by a majority vote of each Board, elect to unite, the said several districts may associate as one district, and hold a fair in any of said districts, and may, for such purpose, draw the appropriation for all of said districts, and expend the same for said fair in like manner as in the case of one district holding a separate fair.
- SEC. 3. Any fifty or more persons, representing a majority of the counties within any one of the districts above constituted, may form an association for the improvement of the material industries within such district, and when so formed the association shall be known and designated by the name of ——— Agricultural Association, and by such name and style shall have perpetual succession, and shall have power and authority to contract and be contracted with, to sue and be sued, to have and use a common seal, to

have and hold and lease real estate, with such buildings and improvements as may be erected thereon, and may sell and lease and dispose of the same at pleasure. The real estate, except as hereinafter provided, shall be used by such association for the purpose of holding exhibitions of horses, cattle, and other stock, and of the agricultural, horticultural, viticultural, mechanical, manufacturing, and domestic products of such district, with view to the improvement of all industries in the same. But the said association shall have the power, and are hereby authorized, to sell and convey any portion of the real estate held by it, by whatever title derived, which may not be necessary for the permanent use of said association for the purposes aforesaid.

c. 4. The officers of such association shall consist of eight Directors, who shall constitute a District Board of Agriculture for District Number —; a President, who shall be one of their number; and a Secretary and Treasurer not of their number.

c. 5. Within ten days after the formation of any new agricultural association within one of the districts above constituted in accordance with the provisions of this Act, and in case of such formation to the Governor, the Governor shall appoint eight resident citizens of such district as members of a District Board of Agriculture for said district, the term of office shall be four years, except as hereinafter provided.

c. 6. Within ten days after their appointment, the persons so appointed shall assemble as required by the Constitution, and shall meet at a place within the district and organize by the election of one of their number as President of the Board and association, who shall hold said office of President one year, and until his successor is elected; he shall also elect a Secretary and Treasurer.

c. 7. At the same meeting the members of the Board shall, by lot or otherwise, divide themselves into four classes of two members each. The terms of office of the class shall expire at the end of the first fiscal year; of the second class, of the second year; of the third class, of the third fiscal year; and of the fourth class, at the end of the full term of four years. The fiscal year shall be from December first to December last; provided, that all officers of agricultural districts now in office under any law heretofore passed shall hold office for the term for which they were appointed, except in cases specified in section two of this Act. And the agricultural associations heretofore organized shall be continued in force, and, so far as applicable, are made agricultural districts under this Act.

c. 8. Each association so formed and organized is hereby declared and shall be recognized a State institution, and the Board so appointed and qualified shall have the exclusive control and management of such institution for and in the name of the State, shall have the possession and care of all the property of the association, and shall determine the terms of office and bonds of the Secretary and Treasurer, and determine their duties and powers. They shall have power to make all necessary by-laws, rules, and regulations for the government of the association and the management of its prudential financial affairs. They shall provide for an annual fair or exhibition by the association of all the industries and industrial products in the district, at such time and place as they may deem advisable; provided, that no District Fair shall be held in any of the districts at the same time of the State Fair; and provided further, that the State shall in no case be liable for any premium offered, or award, or for any debt contracted by any District Board of Agriculture or Agricultural Association.

c. 9. When any District Board of Agriculture shall have been classified and organized, as herein provided, the Secretary of the Board shall report such classification and organization to the State Board of Agriculture. He shall also report the same to the Governor, and shall report any vacancy that may occur in the Board to the Governor, who shall fill the same by appointment for the unexpired term.

c. 10. Whenever any such association shall desire to sell any portion of its real estate not needed for the permanent use of the association, for the purposes specified in section two, and such real estate be held by such association under a deed or deeds of conveyance conveying the said lands in trust, to be held in perpetuity as a place for holding cultural exhibitions or fairs, or for other permanent purposes of such association, it shall be lawful for such association to file its complaint in the Superior Court of the county in which such lands are situated, setting forth the nature of the title under which the same are held, and that it is the desire of the said association to sell and dispose of such real estate, and praying for judgment authorizing it to sell and convey the same. In such action the trustee or trustees in such deed or deeds, or the survivor or survivors of them, or the heirs, administrators, or executors of deceased trustees, as the case may be, shall be made parties defendant; and upon service of the summons upon such defendants personally, or by publication, or upon their appearance, the Court shall have jurisdiction in the premises; and the deed executed under and in pursuance of the judgment of the Court shall be valid and effectual to convey to the purchaser the title of the association, and that of all of its predecessors in title made parties to the suit.

c. 11. So much of an Act entitled "An Act to form agricultural districts, to provide for the organization of agricultural associations therein, and for the management and control of the same by the State," approved April fifteenth, eighteen hundred and eighty, of the several Acts amendatory thereof, and as are in conflict herewith, are hereby repealed.

c. 12. This Act shall take effect from and after its passage.

AGRICULTURAL DISTRICTS

ORGANIZED UNDER AN ACT APPROVED APRIL 15, 1880, AND AMENDED MARCH 6, 1883; MARCH 14, 1885; MARCH 9, 1887; MARCH 6, 1889; MARCH 20, 1891.

- No. 1. The counties of San Francisco and Alameda shall constitute Agricultural District No. 1.
- No. 2. The counties of San Joaquin and Calaveras shall constitute Agricultural District No. 2.
- No. 3. The counties of Butte and Colusa shall constitute Agricultural District No. 3.
- No. 4. The counties of Sonoma and Marin shall constitute Agricultural District No. 4.
- No. 5. The counties of San Mateo and Santa Clara shall constitute Agricultural District No. 5.
- No. 6. The county of Los Angeles shall constitute Agricultural District No. 6.
- No. 7. The county of Monterey shall constitute Agricultural District No. 7.
- No. 8. The county of El Dorado shall constitute Agricultural District No. 8.
- No. 9. The counties of Del Norte and Humboldt shall constitute Agricultural District No. 9.
- No. 10. The counties of Siskiyou and Trinity shall constitute Agricultural District No. 10.
- No. 11. The counties of Plumas and Sierra, shall constitute Agricultural District No. 11.
- No. 12. The counties of Lake and Mendocino shall constitute Agricultural District No. 12.
- No. 13. The counties of Sutter, Yolo, and Yuba shall constitute Agricultural District No. 13.
- No. 14. The county of Santa Cruz, save and except that part thereof southeast of the line beginning at a point where the Aptos Creek empties into the bay of Monterey, and extending directly northeast to the boundary line of Santa Clara County, shall constitute Agricultural District No. 14.
- No. 15. The counties of Tulare and Kern shall constitute Agricultural District No. 15.
- No. 16. The county of San Luis Obispo shall constitute Agricultural District No. 16.
- No. 17. The county of Nevada shall constitute Agricultural District No. 17.
- No. 18. The counties of Alpine, Mono, and Inyo shall constitute Agricultural District No. 18.
- No. 19. All that portion of Santa Barbara County lying east of the Gaviota and south of the Santa Ynez Mountains shall constitute Agricultural District No. 19.
- No. 20. The county of Placer shall constitute Agricultural District No. 20.
- No. 21. The county of Fresno shall constitute Agricultural District No. 21.
- No. 22. The county of San Diego shall constitute Agricultural District No. 22.
- No. 23. The county of Contra Costa shall constitute Agricultural District No. 23.
- No. 24. All that part of Santa Cruz County southeast of a line beginning at a point where the Aptos Creek empties into the bay of Monterey, and extending in a direct line northeast to the boundary line of Santa Clara County, shall constitute Agricultural District No. 24.
- No. 25. The county of Napa shall constitute Agricultural District No. 25.
- No. 26. The counties of Sacramento and Amador shall constitute Agricultural District No. 26.
- No. 27. The county of Shasta shall constitute Agricultural District No. 27.
- No. 28. The county of San Bernardino shall constitute Agricultural District No. 28.
- No. 29. The county of Tuolumne shall constitute Agricultural District No. 29.
- No. 30. The county of Tehama shall constitute Agricultural District No. 30.
- No. 31. The county of Ventura shall constitute Agricultural District No. 31.
- No. 32. The county of Orange shall constitute Agricultural District No. 32.
- No. 33. The county of San Benito shall constitute Agricultural District No. 33.
- No. 34. The counties of Modoc and Lassen shall constitute Agricultural District No. 34.
- No. 35. The counties of Merced and Mariposa shall constitute Agricultural District No. 35.
- No. 36. The county of Solano shall constitute Agricultural District No. 36.
- No. 37. All that portion of Santa Barbara County not included in Agricultural District No. 19 shall constitute Agricultural District No. 37.
- No. 38. The county of Stanislaus shall constitute Agricultural District No. 38.

REPORT.

OFFICE OF THE STATE BOARD OF AGRICULTURE,
SACRAMENTO, February 1, 1891.

Excellency H. H. MARKHAM, Governor of California:

IR: The law wisely provides for an annual accounting by each of institutions fostered by the State. To you and the public in general herewith present a full review of our transactions for the year just ed. That we have, as an agent of the State, assisted in making lic the various progressive features of the productive qualities of a soil and shop, we are certain. That the public are enlightened the producer benefited by these opportunities, we have no doubt. ompanying and forming a part of this volume for 1890 will be ad reports from the various District Agricultural Associations, ather Review, and statistics upon the most important agricultural ources of California.

OBJECT.

eriodically the question is asked, by those not directly interested in cultivation of the soil, what are the duties of the State Board of iculture? For the information of all, we would say that our object o conduct an institution, by and with the consent of the State, reby the development of California's resources may be encouraged, the products shown in a practical manner; to bring the attention he public to the capabilities of our soil, or, in other words, to bring ut a closer relationship between the producer and consumer.

he annual exhibitions, such as are conducted under the auspices of Board, are as essential to the advancement of California's resources, the relations are the same as between any other bureau of informa- in existence. Annually our report is published, containing much rmation of practical value to those interested, and it is eagerly ght by the non-resident applicant who is seeking information, with ntion of locating in the State, as to California's capabilities. Object ons, such as are found each year at the annual exhibition, give the lucer from the most remote part of the State an opportunity to show products, increase the market facilities of, and attract attention in eral to the section represented.

here is not one exhibitor out of the many that are annually found he State Fair of California but what will say his personal business been stimulated by the premiums received.

n the Live Stock Department, the annual sales run into the thousands. producer and purchaser here meet and make their trades, as their res dictate. Here is found an assortment of breeds that would ire months of time for the purchaser to examine but for an annual uring of this character.

his Society draws less upon the State, in proportion to the amount

of business transacted, than any one of the other institutions under State control. It is not, as many suppose, conducted wholly at the expense of the State. It is merely aided to the extent of \$17,500. It is almost self-sustaining, and were it not for the expense of keeping a large property, and the constant replacing of buildings, and building additional structures, to keep up with the increasing demand for space, we could make it self-supporting. The receipts and disbursements, as will be seen by reference to our financial statement, amount annually to over \$100,000. Of the \$17,500 given as aid by the State, \$2,500 is expended for the care and insurance of the Exposition Building, and the remainder (and more) is devoted to cash premiums, which go directly into the hands of the producers, thereby encouraging them in their good work. From the soil and the work-bench comes the money that is used in daily commerce, and too much encouragement to the sturdy tiller and mechanic cannot be given. If it is desirous to have a prosperous community, encourage labor and you promote wealth; discourage it and you promote idleness.

It is not our purpose to offer any defense for the institution, nor the manner in which its affairs are conducted, further than to make a clear statement regarding its object and standing. The work accomplished during the thirty-seven years of its existence speaks for itself, in almost every county of this great State.

REVIEW OF THE SEASON.

California is a country of many climes, and its seasons are variable. The one just closed, from an agricultural standpoint, was not up to the average year in point of production of cereals, etc. The rains began early and were prolonged far into the spring, thereby wholly preventing the seeding of a large area of land prepared to plant, and the plowing of any, to speak of, that is usually winter sown. This drawback gave us a decided decrease in acreage to grain, and prevented as well the very large increase in tree planting. Not one half the acreage intended was planted to trees.

The yield of grain, for causes above assigned, was greatly hampered, the result showing but about thirty-seven million bushels of wheat as against nearly fifty million for the preceding season.

The yield for 1891 should be a great improvement over the past season, as the rains have been opportune for plowing, the weather since favorable to planting, and reports show that all the land available is being seeded, thereby giving us a large increase of acreage, which, with the usual spring rains, should return a yield as great as the largest seasons of the past. It is not the great abundance of rain that makes a season prosperous, but its coming at periods needed is the great advantage. Six inches of rain during the months of November and December, with favorable weather following, gives us a much greater acreage than does double that amount of rainfall during this period, as there are many acres of our best wheat land that cannot be properly worked with a greater amount of rain. Any year that gives us from ten to twenty inches of rain, coming at intervals during our seeding period, with favorable weather between showers, insures us a most prosperous season. Thus far the present season has been most favorable, and with a moderate rainfall to follow, should give us an abundant yield, and corresponding prosperity throughout the State.

THE EXHIBITION OF 1890.

The great impetus given our horticultural interests by increased hands each year for our fruit throughout the entire country, is sure to encourage the further planting of trees, and it is safe to predict there will be a much larger acreage planted to trees this year than of any season of the past.

IRRIGATION.

We believe that irrigation is of utmost importance to California. At while in the past a greater portion of the State has prospered without it, the advanced progress made by the use of water demonstrates its usefulness and necessity, especially in diversified farming.

The great abundance of water available in California for this purpose is likely to lead to undue extravagance and speculation in its use. We deem it proper to enact laws to compel economical and frugal use of all waters in the State.

While most of our arable lands are susceptible of cultivation without use, the productions can be greatly increased by a drenching once or twice a year; and now that some attention is being given to the reclamation of arid lands, its use on this character of land is equal to one half the value of said lands when reclaimed or made capable of cultivation.

OUR RESOURCES.

California is replete with remunerative resources, both natural and artificial. The natural resources embrace every kind and character of soil products, which find ready market for their disposal. We maintain that the cultivation of the soil is the foundation of prosperity in every country, and more especially so in California, where the climate is a factor to this calling. Our agricultural developments show wonderful progress each season; the advancement is more marked in the horticultural line, which gives better returns upon small investment than other agricultural pursuits. In this respect we take the lead in the production of deciduous, tropical, and small fruits, as well as vegetables, and as a matter of commerce these productions now occupy a position and give to us the same distinction the enormous yield of our wheat fields did in years past. The character of our soils is such that it will be many years before the replenishing process of fertilizing, common in other States, will be necessary here. The soil of California is of many kinds, each of which has its special productive qualities, so that the much desired variety of products so beneficial to the prosperity of a State are here obtainable.

In resources of interest to the wage earner, California is abundant. Other than the demand from increased productions of the soil, there are new developments constantly being made that are of benefit to the laborer. The abundance of petroleum found and being daily worked for in our southern mountain ranges; the existence in close proximity to our metropolis of bituminous rock, the use of which for street paving promises to be general, and the utilization of our various building stones for the more substantial improvements, all give increased opportunities and demand for labor. Thus, favored with natural advantages not to be found elsewhere, California is certain to prosper and grow into a thickly populated State.

The annual State Fair, in a State as productive as California, is looked upon as a highly essential occurrence, not only as a factor for the introduction of new products and wares, but as a means of keeping before the public the many miscellaneous resources of commercial value for which a State may be noted. The consumer here expects to view the results of experiments, and obtain information relative to cost of production in and capabilities of the various districts of our State, and of matters and things in general affecting trade.

The small producer, in his endeavor to obtain recognition by the public for the purpose of placing his article of trade upon the market, is often nonplused as to the mode of procedure. He applies to the merchant or manufacturer, who is loth to take hold of and introduce his wares before there is a demand for them by the trade, whereas the public have no idea of their existence. His production may or may not be what is wanted by the people. He awaits the opening of the Exposition for the purpose of feeling the public pulse regarding his article, and to ascertain whether or not he has labored in vain. He establishes his booth in the exhibition. If his goods are of merit the public are not slow to recognize them, and immediately in commercial centers they are inquired for by the consumer, and the tradesmen are required by the constant demands to place the article in stock. This same experience has resulted in bringing into prominence many districts of our State whose agricultural advantages were wholly unknown before the exhibition was made at the State Fair.

Many similar cases of the ones mentioned have occurred within the observation of the management during the past decade, and often great returns to the individual and benefit to the community have resulted.

The accomplishment of this character of work more than doubly repays the State for the small expense required.

The State Fair of 1890 was the thirty-seventh annual exhibition given by the State Agricultural Society. In exhibits of a general character it was complete; all parts of the State had representation. In quantity the agricultural productions were not up to former years, owing to the result of an unusually disastrous season to the farming community. The overflow of a great portion of river lands encumbered the farmers of those rich districts to such an extent as to preclude them from taking part, as is usual, in these annual exhibitions. But where the deficiency occurred by reason of the absence of agricultural products, it was more than met by an overplus of mechanical productions. While our endeavors are to urge and promote the cultivation of the soil, our desires are to also aid in every way possible all kinds of mechanical pursuits, and the showing made at the exhibition of 1890 satisfied us our efforts were recognized.

The increased exhibition of live stock at the Park grounds over that of the year previous was an assurance that the opportunity was welcomed by the breeder. Over twelve hundred head of improved live stock were here exhibited, and the great benefit derived by the small breeder in being thus enabled, without great expense, to show his success in the interest, was gratifying in the extreme. No better chance is given the small breeder to attract the attention of the purchaser to his stock, whereby he may realize, than at these exhibitions, and many of

the heaviest and most successful breeders of improved stock in California received their first impetus to success at the State Fair. The value of these annual gatherings to a State cannot be estimated from a monetary standpoint. They have a most stimulating effect upon the various industries of a State, as competitive comparisons assist progression, which is bound to result in additional resources, and the greater the number the more prosperous will be the community at interest. A full report of all exhibits and awards made will be found in this volume.

LIVE STOCK.

From its inception this Society has been the advocate of improved breeding of live stock. Our schedule of awards each season since organization shows advancement in the inducements to breed the best. Our aim has been to so impress upon the producer the fact that cost of maintenance of a well bred animal is no more than that of one of an inferior breed, and the returns certainly more satisfactory, that he will, in his selections, be governed by the progressive spirit that prompted our advice.

The constant reiteration of this advice has had its effect, and it is with some degree of self-satisfaction that we refer to the characterized breeding of all kinds of live stock reared in this State.

The great State of Kentucky, with all her advantages for the carrying of stock breeding, owes her reputation to the intelligence shown by breeders in the selection of high class stock, whereby she had attained standing that was hard to overcome. She was for years the recipient of our gold for stock of all kinds, but now our breeders, with one thing the experience of those of Kentucky, have been able to surpass them in prominence and production, and obtain returns from this same State for our highly developed trotting stock, which illustrates they are now in recognizing merit, and are still seeking blood of standard character and demand, in their endeavors to excel.

The trotting breeding interest of California now forms a most important part in the resources of the State; in fact, it is one of our leading interests, and must be maintained and encouraged to the extent its importance demands.

During the season just closed, the public sales in the city of New York alone of California-bred yearlings and two-year old trotters aggregated over one half million of dollars, and the demand for the class of stock is such that our prominent breeders have arranged to hold these sales annually, not unlike the handling of our great fruit output, as by this method quick returns are obtainable, and as long as satisfactory prices are available the supply will be forthcoming.

The most remarkable returns, during the season of 1890, by an individual breeder, were those obtained by Hon. L. J. Rose, of Los Angeles. His sale embraced the get of Stamboul (2:11) and Alcazar (2:20). Of the former lot were ten yearlings and ten two-year olds, which brought in aggregate \$74,800, or at an average of \$3,740 each. Of Alcazar's get were offered six yearlings and six two-year olds, bringing for the twelve head a total of \$31,800, or an average of \$2,650 for each. Added to these amounts the sale of Stamboul for \$50,000, and Alcazar for \$29,000, and we have a grand total of \$185,600 for the lot. Can any State with double the experience of California make this showing?

That the judgment displayed in breeding was the leading factor, we admit; that our climate and feed was an able adjunct, we have no doubt; that it has been accomplished, we know; and the part taken by this Society in the encouragement of just this very idea of preëminence, we are proud to claim was not a detrimental element in the make-up of the success.

In the encouragement of speed in the trotting horses, we have accomplished much more than was believed to be possible by those who, in the past, were opposed to us for our proclivities in that direction; that it has been a benefit to values in our property no one doubts.

The history of this Society in the promotion of this great interest makes plain the necessity of stimulation in more remote industries, and the success resulting in the many already accomplished emboldens us to renewed efforts towards the others. The advancement made in this pursuit has encouraged the investment of capital not otherwise attractive to this State. Early development is one of the essential advantages we have, and the climate that assists in this is here to be found.

Our custom is and has always been, in the furtherance of the breeding interest, to supply the advantages to demonstrate the capabilities of our stock. Under it we inaugurated, in 1888, a contest open to all sires in training that year, and those taking part attracted the attention of the trotting-horse world to California's champions. Soon after, negotiations for their purchase began, and resulted in the sale of one for \$20,000 and another for \$50,000, and a refusal of a like amount for another, and those prices were not given and offered for the machine use of racing, but solely for breeding purposes.

That this great trial of speed was of much value to the interest and State there is no question, and, as it was brought about through the agency of an institution fostered by the State, we feel a pride in its reference herein. The same arguments in the breeding of thoroughbreds may also be used. As the most valuable events for this character of horses are given for the two and three-year olds, early development of both body and speed will make them also an important article of commerce in the near future.

The location here of the most extensive breeding farm (Rancho del Paso) in the world, is sure to be an additional attraction for California in the advancement and extension of this industry, and we say to those contemplating engaging in the breeding of any or all kinds of live stock, examine our advantages before locating elsewhere, and you will surely agree with us that there is but one place for the successful continuance of the breeding of stock, and that place is California.

RIVER IMPROVEMENTS.

That the great waterways of the Sacramento and San Joaquin Valleys are in danger of being entirely lost to navigation there is no doubt. That the valuable agricultural lands bordering upon these rivers are promised destruction is plainly discernible. So no time should be lost in securing the necessary assistance to preserve to navigation, in a manner protective of the interests of the people of the interior, these great natural highways. In the development of the resources of a State, the natural advantages for transportation facilities is a subject that is of the utmost importance to the community at large, and the

tinuance and maintenance of these advantages should be guarded with utmost diligence.

In the primitive days of California the first steps in the cultivation of our soil were encouraged by the navigable features of our great rivers, and for the first twenty years of our agricultural existence no other means were available for transportation of our products to market. That they greatly assist in the encouragement of the cultivation of the soil no one will deny, and the subsequent success of agriculture in this State is greatly due to the unparalleled productions and the early showing made from these rich river lands. As these watercourses have become the national highways for public use, and as the Government has taken absolute control of them between banks, their navigable features should be maintained by the General Government, by clearing them of all hindrances to this important agent of the productive returns of the soil. The utilization of the flow of water at flood periods, with the assistance of such artificial means necessary, would, in a short time, give to the deep and pure navigable streams of the past, that were of so much value to the present prosperity of the State. Neglect of levee districts to keep in harmony has also been a most serious drawback to the absolute reclamation of lands in the river districts. A law of general character is necessary to bring about a closer relationship between districts, so that one may be preserved without injury to others. There is no reason why this cannot be done, and until those interested directly agree upon a measure, so long will effective work be delayed. It is incumbent upon our Senators and Representatives in Congress, and the State Legislature, to give this important subject their immediate attention. A people of long suffering from these wrongs require it; the sense of right and justice demands it, and we say that, as a great interest is being yearly crippled by the prolonged delay and inaction, immediate relief should be speedily forthcoming.

FRUIT GROWING.

As the prosperity of a State depends upon its productive resources, inducements to merit in each department of soil yield should be herein made. In the recognition, assistance, and encouragement of the leading products of the past, this Board has been most liberal. To recapitulate briefly the productive statistics of the State, as a whole, would require more space than can here be given; further on in the volume these facts will be fully shown.

The eagerness with which our fruit industry is watched by the moneyed institutions of the State indicates an interest therein that will encourage additional use for money, with corresponding benefit. Aid in the extension of this enterprise, if needed, should be available, as in what any man can capital be better employed than in pushing soil productions? It is safer than in other mercantile pursuits as a rule; and when capital begins to take a start in that direction, we will see not only a land of unexampled beauty, but of unexcelled prosperity as well.

It remained for the sturdy and enterprising man to show what could be done, as with all industries; and now that capital no longer fears the experiment of a new departure or avenue for its use, a greater progress will be seen within the next decade than has been shown in the entire history of our State. The multiplication of demands for our fruit

makes it certain that the old system of grain growing, with its multitude of acres that are necessary to success, is entirely out of proportion to the returns made from a smaller area of land in the cultivation of fruit.

To thoroughly populate a country with an intelligent people no better agent than fruit growing could be brought forward.

Land susceptible to fruit culture makes returns of from \$100 to \$250 per acre on an average in ordinary years, thus enabling from ten to twenty acres to make the returns usually acquired from one hundred and sixty acres in grain growing.

A wheat crop a few years since, amounting to \$20,000 or \$25,000, attracted the attention of the world, and required hundreds of acres to yield it. Now a fruit crop from five hundred acres yields from \$50,000 to \$100,000, and is now the wonder in money circles.

These statements to the inexperienced seem extravagant, but they have been demonstrated in several instances during the season just closed, which gave us large prices; but we say quarter the returns, and where can any other country or industry equal it?

We are met with objections to these statements from many that had the opportunities to reap the benefit, but lacked the courage to make the experiments. But facts shown by figures are indisputable, and we will in this volume show in detail where the returns from fifty-eight acres of land in Sacramento County, forty of which are planted to orchard and eighteen to table grapes, yielded the past season \$42,000, or nearly \$800 per acre. That this is an extreme comparison, we admit; that good judgment, care, and attention brought it about, we will not deny. But cannot, we say, the same be accomplished by any one who will give the subject the attention it requires?

Like other vocations, some will make great headway and be successful, while others will drag along in the old ruts. But fit the man to the vocation and he will be as successful as the best.

Our fruit output for 1890 was in the neighborhood of ten thousand carloads of fruit in their different state, viz.: green, dried, and canned. In aggregate this means at least one hundred thousand tons, which means a return to the producers of not less than ten millions of dollars.

From this grand resource California reaps a benefit not elsewhere attainable from a like source. While the great stringency of the money market was troubling our eastern brethren, this State had a plentiful supply of that article to conduct its affairs. This condition was due largely to the returns from our fruit shipments.

The increase each season of acreage coming into bearing has had no effect upon the demand thus far. It has not been yet met, nor do we believe it will for some years to come, as we are amply protected from such a likelihood on account of our State being the only one that is able to produce many of the staple fruits.

Then again, when we realize that the sixty-five or seventy millions of people in the United States is not our only market, and that after supplying them the remainder of the world is at our demand we should not hesitate in the extension of the business.

The area of production as a whole is small, when compared to the remainder of the world, where deciduous and citrus fruits are not susceptible of cultivation.

The progression of the fruit industry will be profitable to not only the owner and grower, but to the towns of the State as well.

The establishment of canneries, the additional employment of help, aid the communities at large, and the future of this great State will depend largely on this interest.

We cannot but think the time is ripe for all who care to embark in this industry. The markets are established, our products have the ability necessary to retain their reputation, and as a whole no industry this time presents such flattering inducements for investment as the cultivation of fruit.

THE WORLD'S COLUMBIAN EXPOSITION OF 1893.

California has more to gain by representation at the World's Columbian Exposition of 1893 than any other State in the Union. Her great extent of country; her desire for increased population, that the many developed resources may be opened, and in which new blood, new men, and willing hands are necessary, and in the further development of the many and rich resources now in hand, are reasons why she should make a display and form a brilliant part of the grand Exposition.

No State or country can make the display California is capable of in its agricultural department, and as the Exposition will be international in character the occasion is such that will show the wonderful growth, development, and unlimited resources of our State, in comparison with all the countries represented, and will reflect, we are certain, great credit upon the State and the intelligence of its people.

The importance of our agricultural interests, varied as they are, and covering the largest part of the wealth of the State, merits care and attention in their proper presentation, when we need fear no competition or supremacy.

With such facts as are obtainable regarding the opportunities and inducements for tilling the soil in California, as can be there shown, will make for us a reputation that will greatly assist in promoting immigration and further advertising our products, that additional market facilities may be had for their disposal.

In the majority of States in the Union our products are yet almost wholly unknown. We want advertising, because we have the products to advertise, and after the introduction they will make for us additional demands necessary to keep pace with our rapid growth.

The same advantages that have assisted our resources at home through the medium of annual exhibitions, will be given us at the great Exposition, with a broader field for action.

We appeal to the Senators and Members in Legislature assembled to be parsimonious in their aid to this grand event, in which California has much to gain and nothing to lose. We say to you that the public, and especially the producers of California, recognize that this is an extraordinary expense and should not be a chargeable extravagance on the dominant party. In fact, it is to be hoped that no politics will enter into the discussion of the question by either of the great parties. The Legislature represented, but that the good of the State, the welfare of the farmers and producers, whereby their achievements are to be shown, will govern the body in their action, as by the encouragement of our products the prosperity of a State in all its branches of trade is assured. When a question of this character arises and is unanimously indorsed by both press and public, it is a criterion that public opinion approves and consents to the measure.

The public are represented in the various departments of government by Boards, Commissions, and other agencies, and there is not, that we are aware of, any opposition, but on the contrary, unqualified indorsement of the proposed action.

Should the expenditure of any part of the appropriation be authorized through this department, we will endeavor to have it judiciously used for the benefit of the State as a whole, that each county may be fully represented in its agricultural capacity.

We of California are aware that agriculture is our leading industry; upon this a showing should be made in keeping with our ability. The result, we are positive, will fully justify the expenditure of the amount of appropriation asked.

CITRUS FAIRS.

The encouragement of citrus culture by the appropriation for fairs, to be held in the State at the period of production of this character of fruit, has with two seasons' experience proved a wise action on the part of the Legislature of 1889.

That an increase of taxable property to the State was caused by the stimulation and publicity given through these winter exhibitions is a well known fact.

The State Board of Agriculture, under whose auspices the appropriation was expended, were agreeably surprised at the first attempt made at Oroville last winter. To find an exhibition of from fifteen to sixteen hundred boxes of oranges from a section of the State heretofore unknown in the commercial marts of the country in the production of this character of fruit, was a most interesting subject, and one that created considerable discussion, which resulted in the sale of much land and the planting of a very large additional acreage in citrus fruits.

The great value of this industry to California is, that in different sections of the State the ripening of citrus fruits occur at different periods, thereby giving the producers the advantage of an early market for one part, and of a late market for the other, which enables those interested in the culture of this character of fruit to receive full benefits without competition.

Then again, the cultivation of this product gives to California growers an almost continual fruit-shipping season throughout the entire calendar year—from April to November for deciduous fruits, and from December to February for citrus fruits from the north, and from February until June the same character of fruit from the southern portion of the State. Thus the northern citrus fruit grower gathers his crop, reaps the benefit of an early market, and has his returns before his brethren from the south are ready to pick; hence, he is not hampered with competition, and the southern grower reaps a like benefit, as the demand is but fairly opened until he is ready to take it up and furnish fruit until the deciduous season opens.

The display of citrus fruits at the fair held in Los Angeles in March was one of great magnitude, and certainly portrayed the capabilities of this grand section of our State, whose achievements have long since been heralded throughout the land, and whose natural resources and abilities to yield in quantity and quality any and all products of the soil are better known than all the remainder of our State.

A full report, with details of awards, accompanied by valuable papers

ad upon the occasion referred to, as well as some facts and figures with names and addresses of growers, giving actual profits in the culture of citrus and other fruits, will be found in this volume.

We recommend that the appropriation for these exhibitions be continued for another term of two years, when thereafter they should be self-sustaining.

IMMIGRATION.

Large land holdings in California have been from time to time severely condemned, and charged with being a serious drawback to immigration, and detrimental to every interest of the State.

Many have undertaken the solution of this question, suggestions have been made, and action urged against the owners thereof, toward the dissolution of these tracts.

The right to acquire, possess, and protect property is given to all men under our organic law, and no arbitrary law or custom should exist that would deprive an owner of his property, be it great or small, without a fair and acceptable compensation therefor, and to think of suggesting any other method is not in keeping with the rights of an American citizen.

The solution of this problem is to encourage the immigration of a class of people that are not speculators in any sense, but home seekers that desire to settle upon and cultivate the land, and make for themselves a productive property. Right here will be said, "How is this to be done upon a limited amount of money? We cannot buy this land that is now held by these rich owners."

But we say to this class of people with but a small amount of money in their disposal, you can buy the land from these large holders, and at such a price, too, that will warrant you in so doing, and the payment for this land can be so arranged as to cover a period of time that will enable you to make it from the land itself. You can get this land at from four to six years, and the character of the lands is such as will produce in that time their purchase price, and leave to the worker a profit besides.

In no other way in our opinion can this question be solved, and the advantages that will come from it to the people, in the future, will more than repay the State for the imaginary drawbacks it is supposed to have incurred upon the community.

By the system now in vogue for the disposal of these large holdings herein referred to, we are sure to get an increase in population of an intelligent and desired class of people with some means, and that will be a credit to the State.

Thus we say these large land holdings have not been such a serious drawback as was supposed. On the contrary, we argue they will be a means of giving to us, not only desirable settlers, but where required a thorough system of irrigation. The extensive and costly irrigating systems of this State are the direct outcome of large land holdings. These undertakings are of such magnitude that it is safe to presume they would not have been executed and carried to a state of efficiency if it had remained for the owners of small tracts to assume the responsibility and procure the necessary means.

Thus the owners of the small tracts increased population will give, will derive the benefit of the expenditure of large capital, at a

additional expense in the first cost of their land, moderate in proportion to the great results which follow the application of intelligent industry.

Through the combination of capital in several of our largest irrigated districts, lands heretofore known as "desert" have been, by the great system of irrigation used, entirely reclaimed, and are now open to settlement for the small holder, and show wonderful results in productive qualities.

The accomplishment of which gives to the State an additional area of land for cultivation that has been and would continue to be a waste desert were it not for investments made by men of capital.

The organization of colonies for the cultivation of the soil is constantly going on in this State, and thousands of acres have been thus disposed of and are planted under this system.

The tendency to overcrowd the cities has been a serious drawback to the agricultural interests of our State, as well as detrimental to the newcomer, and until this class are induced to become productive neither the cities nor the interior will make progress.

The opportunities now offered throughout the agricultural districts of California will surely induce settlement therein, and the next few years will show a prosperous period, which will, as time progresses, be of greater benefit to the cities and towns than through any other source attainable.

CROP REPORTS.

This State is sadly deficient in a method to obtain throughout the year, at intervals most needed, official crop prospects.

To the commercial centers its value cannot be estimated. To the farming community its benefit would be felt. There is no reason why such a system could not be inaugurated at a little expense by coöperation with the Signal Service of the United States.

This Society is willing to undertake the management, if a sufficient amount of money is appropriated to cover its introduction and maintenance.

Modern appliances of every kind and character for the dissemination of knowledge are coming into use daily throughout the civilized world as a necessity to trade, and there is no reason why a State like California should not be able to keep the status of her productions and trade in general constantly before the public.

There is a bill now pending before the Legislature for the establishment of this bureau of information in connection with this Society, at an expense not to exceed fifteen hundred dollars after the first year, and but three thousand for equipment the first year, which we hope, for the good it will be to California, will pass. It is hoped that the cry of retrenchment and reform will not go so far as to cripple the productive industries of our State, but that sufficient curtailment can be had, without this injury, that our taxpayers' burdens may be relieved to some extent.

FINANCES.

The season of 1890 was not as prosperous for the Society as many of the preceding ones. This was due to two causes:

Firstly—The extreme lateness of the agricultural season gave the

people no returns to speak of prior to the date of our exhibition, as the bulk of the receipts for both grain and fruit came in about the time after the State Fair was held, whereas with a usual season, money could have been more plentiful at a much earlier period.

Secondly—The celebration given in San Francisco by the Native Sons of the Golden West, in honor of the fortieth anniversary of the admission of California into the Union, during our annual fair, which attracted the largest crowd ever known to that city. The expenditure of money on that visit by the people that usually come to the State Fair, precluded their attendance this season, which of course entailed a heavy loss in receipts. The gate and privilege receipts fell short of the season of 1889, \$10,681 84.

As our expenses of every character, except premiums, care and insurance of the Exposition Building, must come from our earnings, and those for building and improvements from our profits, it can readily be seen the blow was a heavy one to our profit and loss account.

This state of affairs greatly crippled our improvements for the season and we refrained from doing any more in this line than was actually necessary, although improvements are sadly needed at both Park and Pavilion.

New and additional stabling is required to accommodate the increased demand of exhibitors. The accommodations for display of agricultural machinery are meager, and the exhibitors find much fault with the limited space at our command.

What we need in this regard is an additional wing (of one hundred or four hundred feet) thrown across the west end of the main building which should and could be devoted exclusively to the exhibition of agricultural machinery. The progression made in this valuable industry demands it; but until we have available funds this portion of our exhibition will be necessarily hampered.

At this time we find our assets and liabilities to be as follows:

LIABILITIES.	
O. Mills & Co., loan	\$7,772 26
Bills payable account	3,554 87
Notes due, fixed events	3,325 00
Bank racing account	973 45
	<u>\$15,625 58</u>
ASSETS.	
Entrance due, account races	\$3,540 10
Bills receivable	401 66
Cash on hand	253 72
	<u>4,195 48</u>
Net indebtedness February 1, 1891	<u>\$11,430 10</u>

Showing gain for the year to be as follows:

Indebtedness February 1, 1890	\$12,628 00
Permanent improvements made during the year	1,304 00
Total	<u>\$13,932 00</u>
Indebtedness February 1, 1891	<u>11,430 10</u>
Gain for 1890	<u>\$2,501 90</u>

RESUMÉ.

In the foregoing, we have endeavored to bring to the notice of the world some of the superior achievements of our producers, the capabilities of production our soil offers, as well as to make a few suggestions of general interest to the people of this State.

California as a whole has ample advantages for the maintenance of ten times her present population, which could be expatiated in a much larger volume of space than we have here occupied. Suffice it to say "a word to the wise is sufficient," and we believe there is no country in the world where the advantages are equal to those offered here for the soil worker. To this class we say there are grand possibilities here which you should grasp without the aid of beautiful word-painted allurements. We need this class of settlers in our midst; we have the soil that will yield, and in its workings there is far less risk of failure, and much greater opportunity for success, than in a majority of other pursuits.

In the extension of soil cultivation lies the future of California; that its progress will be marked, and its achievements great, we are certain; that the result will fully justify our prediction, we leave for time to substantiate.

We append our financial statement in detail, to which we invite inspection:

FINANCIAL SUMMARY.

Cash on hand at commencement of year	\$177 98
Total receipts from all sources	<u>103,438 80</u>
	<u>\$103,616 28</u>
Total disbursements	<u>\$103,362 56</u>
Cash on hand February 1, 1891	<u>253 72</u>
	<u>\$103,616 28</u>

CHRISTOPHER GREEN,
President.

EDWIN F. SMITH,
Secretary.

FINANCIAL STATEMENT.

FEBRUARY 1, 1890, TO JANUARY 31, 1891.

SUMMARY.

RECEIPTS.

RECEIPTS.		
1890.		
Feb. 1—	Cash balance.....	\$177
	Rents.....	\$4,060 00
	Race entries, forfeits, etc.....	17,882 50
	Fixed event payments.....	1,255 00
	Park and Pavillon receipts during Fair.....	35,312 93
	Premiums and care of building.....	17,500 00
	Expense rebates.....	466 59
	Bills payable.....	3,554 87
	Entrances due collected.....	336 40
	Spring race meeting receipts.....	15,797 75
	D. O. Mills & Co., loan.....	7,772 26
		<hr/> 103,438

DISBURSEMENTS.

Advertising.....	\$2,220 35
Building and improvements.....	1,304 27
Expense account.....	19,746 60
Premiums paid (exclusive of racing).....	15,761 45
Racing purses and added money.....	27,016 00
Salaries.....	5,164 40
Bills payable, account 1889.....	5,508 31
Insurance.....	1,455 05
Interest.....	837 97
Entrances due, account races 1890.....	1,512 50
Fixed events, paid former collections.....	1,940 00
Park and Pavilion receipts, rebates.....	18 00
Spring meeting payments.....	14,736 80
D. O. Mills & Co., account loan 1890.....	6,140 86

1891.	D. O. Mills & Co., account loan 1890	6,140 86	
Feb. 1—	Cash balance	253 72	
		<u> </u>	\$103,616

RECEIPTS.

1890.		
Feb. 1—Cash balance.....		\$177
RENTS.		
Park rent—10 months, at \$346	\$3,460 00	
Park rent—2 months, at \$300	600 00	

RACES—1890.

Race No. 1—	Entrances, stakes, and forfeits received.....	\$1,535 00
2—	Entrances, stakes, and forfeits received.....	240 00
3—	Entrances, stakes, and forfeits received.....	720 00
4—	Entrances, stakes, and forfeits received.....	270 00
5—	Entrances, stakes, and forfeits received.....	745 00
6—	Entrances, stakes, and forfeits received.....	450 00
7—	Entrances, stakes, and forfeits received.....	120 00
8—	Entrances, stakes, and forfeits received.....	305 00

Amount carried forward.....	\$4,385 00	\$4,237 00
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Amount brought forward		\$4,388 00	\$4,237 98
Race No.	9—Entrances, stakes, and forfeits received	320 00	
	10—Entrances, stakes, and forfeits received	1,300 00	
	11—Entrances, stakes, and forfeits received	520 00	
	12—Entrances, stakes, and forfeits received	600 00	
	13—Entrances, stakes, and forfeits received	350 00	
	14—Entrances, stakes, and forfeits received	262 50	
	15—Entrances, stakes, and forfeits received	360 00	
	16—Entrances, stakes, and forfeits received	640 00	
	17—Entrances, stakes, and forfeits received	700 00	
	18—Entrances, stakes, and forfeits received	560 00	
	19—Entrances, stakes, and forfeits received	420 00	
	20—Entrances, stakes, and forfeits received	250 00	
	21—Entrances, stakes, and forfeits received	90 00	
	22—Entrances, stakes, and forfeits received	30 00	
	23—Race off.		
	24—Entrances, stakes, and forfeits received	1,080 00	
	25—Entrances, stakes, and forfeits received	500 00	
	26—Entrances, stakes, and forfeits received	800 00	
	27—Entrances, stakes, and forfeits received	655 00	
	28—Entrances, stakes, and forfeits received	255 00	
	29—Entrances, stakes, and forfeits received	420 00	
	31—Race off.		
	32—Entrances, stakes, and forfeits received	1,500 00	
	33—Entrances, stakes, and forfeits received	400 00	
	34—Entrances, stakes, and forfeits received	275 00	
Special	—Entrances, stakes, and forfeits received	300 00	
Special	—Entrances, stakes, and forfeits received	250 00	
Special	—Entrances, stakes, and forfeits received	160 00	

FIXED EVENTS—1891-2-3.

President Stake 1891 collected	\$100 00	
Occident Stake 1891 collected	320 00	
Occident Stake 1892 collected	495 00	
Occident Stake 1893 collected	340 00	
	<hr/>	\$1,255 00

PREMIUMS.

State warrant for premiums and care of building.....	\$17,500 00
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EXPENSE REBATE.

Forage sold at Park.....	\$169 82	
Rent of lot opposite Pavilion.....	40 00	
W. L. Appleby, fine.....	100 00	
Forage sold J. E. Camp.....	6 77	
Rent of power, Capital Gas Co.....	150 00	
		<u>\$466 59</u>

PARK AND PAVILION RECEIPTS.

Apr. 28—	C. H. Todd, life membership	\$50 00
Aug. 29—	C. Studarus, life membership	50 00
Sept. 5—	J. S. Cone, life membership	50 00
8—	H. F. Pierson, life membership	50 00
9—	A. G. Johnson, life membership	50 00
9—	Claus Anderson, life membership	50 00
9—	F. Ruhstaller, life membership	50 00
10—	W. E. Newbert, life membership	50 00
12—	Lewis Bell, life membership	50 00
12—	Jacob Heintz, life membership	50 00
18—	Charles B. Strong, life membership	50 00
22—	W. J. Irvine, life membership	50 00

Sept. 8—Double season tickets	\$945 00	\$600 00
9—Double season tickets	1,045 00	
10—Double season tickets	875 00	
11—Double season tickets	1,505 00	
12—Double season tickets	890 00	
13—Double season tickets	465 00	
15—Double season tickets	585 00	
16—Double season tickets	270 00	
17—Double season tickets	140 00	

Amount carried forward.....	\$6,720 00	\$41,442 07
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Amount brought forward	\$6,720 00	\$41,442
Sept. 18—Double season tickets	262 00	
19—Double season tickets	39 00	
20—Double season tickets	7 00	
20—Double season tickets (entry clerks)	325 00	
		\$7,353
Sept. 8—Single season tickets	\$75 00	
9—Single season tickets	105 00	
10—Single season tickets	132 00	
11—Single season tickets	378 00	
12—Single season tickets	186 00	
13—Single season tickets	102 00	
15—Single season tickets	219 00	
16—Single season tickets	90 00	
17—Single season tickets	42 00	
18—Single season tickets	124 50	
19—Single season tickets	7 50	
		\$1,461
Sept. 8—Children's tickets	\$0 50	
9—Children's tickets	1 00	
10—Children's tickets	1 25	
11—Children's tickets	6 00	
12—Children's tickets	13 50	
13—Children's tickets	13 75	
15—Children's tickets	25 75	
16—Children's tickets	23 00	
17—Children's tickets	33 50	
18—Children's tickets	30 75	
19—Children's tickets	27 25	
20—Children's tickets	19 00	
		\$195
Sept. 8—Single admission tickets	\$19 50	
9—Single admission tickets	54 00	
10—Single admission tickets	100 00	
11—Single admission tickets	439 00	
12—Single admission tickets	635 50	
13—Single admission tickets	913 50	
15—Single admission tickets	1,337 50	
16—Single admission tickets	1,608 00	
17—Single admission tickets	2,230 00	
18—Single admission tickets	3,004 00	
19—Single admission tickets	2,612 50	
20—Single admission tickets	1,783 50	
		\$14,737
Sept. 11—Grand Stand receipts	\$73 00	
12—Grand Stand receipts	96 50	
13—Grand Stand receipts	134 00	
15—Grand Stand receipts	183 50	
16—Grand Stand receipts	211 00	
17—Grand Stand receipts	257 00	
18—Grand Stand receipts	427 50	
19—Grand Stand receipts	346 50	
20—Grand Stand receipts	242 00	
		\$1,971
Sept. 11—Special Stand receipts	\$29 00	
12—Special Stand receipts	10 00	
13—Special Stand receipts	8 50	
15—Special Stand receipts	29 50	
16—Special Stand receipts	13 00	
17—Special Stand receipts	20 50	
18—Special Stand receipts	42 00	
19—Special Stand receipts	72 00	
20—Special Stand receipts	51 00	
At office	18 00	
		\$238
Sept. 11—Quarter-stretch badges	\$115 00	
12—Quarter-stretch badges	70 00	
13—Quarter-stretch badges	10 00	
15—Quarter-stretch badges	35 00	
16—Quarter-stretch badges	35 00	
17—Quarter-stretch badges	5 00	
18—Quarter-stretch badges	12 00	
19—Quarter-stretch badges	4 00	
20—Quarter-stretch badges	1 00	
		\$287
Amount carried forward		\$67,739

Amount brought forward	\$6,752 88	\$67,739 82
Sept. 21—Pool privileges	199 05	
Programmes at Park	77 75	
Art catalogues	764 50	
Pavilion privileges	250 00	
Manure privilege	371 00	
Sweepstakes (Park premiums)		\$8,415 18

BILLS PAYABLE.

Capital Gas Company, due October 1, 1891	\$1,382 40	
J. E. La Rue, due October 1, 1891	683 73	
W. K. Vanderslice & Co., due October 1, 1891	1,128 45	
Sacramento Lumber Company, due October 1, 1891	360 29	
		\$3,554 87

ENTRANCES DUE, COLLECTED.

Entrance account 1889, "Maggie E"	\$126 40	
Entrance account 1889, "J. H."	140 00	
Entrance account 1890, "Sheridan"	35 00	
Entrance account 1890, "D. M. Murphy"	35 00	
		\$336 40

SPRING MEETING, 1890.

May 31—Race entries and forfeits	\$6,140 00	
Gate receipts	1,336 10	
Book privilege	2,000 00	
Pool privilege	371 65	
L. Stanford, subscription	1,000 00	
Sacramento Board of Trade	2,200 00	
W. O. Bowers	500 00	
Hall, Luhrs & Co.	500 00	
Weinstock, Lubin & Co.	500 00	
W. Gardner	750 00	
William Land	500 00	
		\$15,797 75

D. O. MILLS & Co.

Loan	\$7,772 26	
		\$103,616 28

DISBURSEMENTS.

ADVERTISING.

1890.		
July 31—Spirit of the Times	\$200 00	
Aug. 7—Red Bluff Sentinel	12 00	
Sept. 8—Journal of Commerce	50 00	
10—Woodland Mail	15 00	
16—Placer Argus	10 00	
Oct. 4—S. F. Call	111 60	
Breeder and Sportsman	185 00	
S. F. Chronicle	167 00	
Pacific Rural Press	150 00	
Examiner	126 00	
Alta Publishing Company	65 00	
Bulletin	80 00	
Evening Post	60 00	
Daily Report	50 00	
News Letter	25 00	
Argonaut	30 00	
Wasp	25 00	
California Fruit Grower	20 00	
Butchers' Gazette	10 50	
Oakland Tribune	35 00	
Oakland Times	28 00	
Galt Gazette	8 00	
Dixon Tribune	12 00	
Stockton Mail	20 00	
Stockton Independent	21 00	
Amador Dispatch	10 00	
Amount carried forward	\$1,526 10	

	Amount brought forward.....	\$1,528 10
Oct. 4-	Marysville Appeal.....	18 00
	Sutter Publishing Company.....	6 00
	Wheatland Four Corners.....	15 00
	Chico Chronicle.....	12 00
	Grass Valley Union.....	8 00
	Nevada Transcript.....	20 00
	Mountain Democrat.....	8 00
	Humboldt Standard.....	9 00
	Nord California Herold.....	7 50
	Fresno Turf.....	10 00
	Contra Costa Democrat.....	6 00
	Napa Register.....	15 00
	Santa Cruz Surf.....	10 00
	Sonoma Democrat.....	20 00
	Vaca Valley Reporter.....	5 00
	Vaca Valley Enterprise.....	7 50
	Merced Express.....	10 00
7-	Record-Union.....	240 00
	Daily Bee.....	195 25
	Oroville Register.....	7 50
	Yolo Democrat.....	12 50
	Sacramento Leader.....	10 00
	Sacramento Themis.....	12 50
22-	J. W. Ferguson.....	10 00
Nov. 12-	Kern County Californian.....	7 50
1891.		
Jan. 9-	J. A. Filcher.....	14 00
		\$2,220

EXPENSE.

1890.		
Feb. 1-	P. S. Lawson, repairs to roof.....	\$27 70
5-	J. M. La Rue, expert salary.....	100 00
10-	W. Gardner, one half telephone rent at Park.....	30 00
14-	F. Zitt & Co., painting smokestack.....	20 00
21-	W. Walters, help drain Park.....	18 00
28-	Postmaster, stamps and envelopes.....	17 40
	Sundries for month.....	17 40
March 8-	N. Shaver, hay for Park team.....	25 70
31-	Sundries for month.....	25 40
	A. J. Muir, repairs.....	67 15
April 30-	Sundry bills.....	23 95
May 13-	Postage.....	26 90
31-	Sundry bills.....	11 85
June 2-	F. Millard, team at Park.....	13 50
30-	Sundry bills.....	26 00
July 15-	A. M. Weber, hay for team.....	14 60
28-	Postmaster, stamps.....	20 00
31-	Sundries, expense bills.....	22 10
Aug. 4-	A. J. Muir, Park repairs.....	14 15
	Wells, Fargo & Co., expressage on reports.....	54 18
12-	National Trotting Association, dues.....	150 00
27-	M. Atkins, team at Park.....	12 40
30-	Telephone rent.....	12 60
	Sundry bills.....	25 40
31-	L. Derr, hay for team.....	14 00
Sept. 1-	C. B. Keys, hay for Park.....	20 10
	Monroe Johnson, assistant starter of races.....	20 00
	John Taylor, assistant starter of races.....	10 00
	Liberati's Band, music.....	2,500 00
	T. J. Awerkamp, balloon ascensions.....	200 00
22-	B. A. Johnson, Directors' stand.....	391 50
19-	C. H. Miles, starter of races.....	27 50
22-	First Artillery Band, music.....	900 00
	C. Green, salary as President.....	500 00
	L. B. Clark, straw.....	517 92
	J. F. Toomey, hack hire.....	25 50
23-	O. P. Dodge, expense and material.....	7 50
	Mrs. Fellows, rent of stalls.....	5 00
24-	Green and Hancock, Los Angeles committee.....	44 00
	Norton Bush, cartage and expense.....	7 50
	L. Winter, cut for advertisement.....	12 00
29-	L. B. Clark, hay for live stock.....	219 50
30-	Sundries for month.....	18 45
		\$6,216
	Amount carried forward.....	\$8,437

Amount brought forward..... \$8,437 20

PARK PAYROLL.

Oct. 4-	G. B. Folger, Assistant Superintendent.....	\$80 00
	James C. Kelly, chief ticket clerk.....	48 00
	C. J. Cox, chief marshal.....	67 50
	W. S. Enos, assistant marshal.....	45 00
	H. Klemp, assistant marshal.....	45 00
	M. Judge, assistant marshal.....	45 00
	Sam. Green, assistant ticket clerk.....	27 00
	James Farris, assistant ticket clerk.....	27 00
	A. Pait, assistant ticket clerk.....	27 00
	E. M. Atkinson, membership ticket clerk.....	36 00
	R. H. Newton, quarter-stretch Superintendent.....	45 00
	L. Hendricks, assistant membership ticket clerk.....	22 50
	H. M. La Rue, Jr., entry clerk.....	65 00
	J. R. La Rue, groom badge clerk.....	27 00
	Paul Maslin, special stand clerk.....	22 50
	H. C. Brown, special stand stairman.....	22 50
	H. S. Beals, special stand usher.....	18 00
	Frank Dray, Directors' stand usher.....	18 00
	George Hamilton, blackboard clerk.....	18 00
	W. H. Baker, blackboard clerk.....	18 00
	Guy F. Maydwell, blackboard clerk.....	18 00
	W. S. Rhees, weigher.....	32 50
	George Bovyer, milk test clerk.....	14 00
	W. Walters, hay delivery team.....	84 00
	John Doherty, poultry watch.....	22 50
	Carter Jackson, hay watch.....	32 50
	William Norman, hay watch.....	32 50
	E. B. Ray, laborer.....	26 00
	Joseph Ireland, laborer.....	13 00
	C. P. Brown, laborer.....	22 00
	Frank Farley.....	51 00
	F. A. Taylor, carpenter.....	33 00
	H. E. Pierce, carpenter.....	25 00
	C. Schuman, laborer.....	21 50
	Joseph Bohn, carpenter.....	2 40
	F. G. Hale, carpenter.....	52 50
	F. Keiffer, laborer.....	20 00
	William Boyle, laborer.....	20 00
	T. T. Burnett, doorkeeper.....	45 00
	C. B. Herndon, doorkeeper.....	45 00
	L. Whiting, Judges' stand.....	36 00
	W. F. Preston, clerk of course.....	45 00
	J. B. Stovall, forage clerk.....	42 00
	John Watson, timers' flag.....	4 00
	M. Carroll, gatekeeper.....	45 00
	W. Young, gatekeeper.....	45 00
	Charles W. Davis, stairman Judges' stand.....	18 00
	John Kofod, police.....	18 00
	William M. Millard, ticket taker.....	22 50
	William Craig, ticket taker.....	22 50
	George F. Bronner, ticket taker.....	22 50
	F. B. Grant, stairman.....	22 50
	S. B. Clow, stairman.....	22 50
	G. W. Todd, stairman.....	22 50
	James Patterson, police.....	18 00
	N. S. Bennett, police.....	18 00
	P. Brogan, police.....	18 00
	J. J. Heffernan, police.....	18 00
	Jerry Millay, police.....	18 00
	P. McDowell, police.....	18 00
	Thomas Considine, police.....	18 00
	A. Grossi, police.....	18 00
	A. Foley, police.....	18 00
	John Perry, police.....	18 00
	H. McCormick, police.....	18 00
	J. H. Coleman, police.....	18 00
	Wm. Clark, police.....	18 00
	M. Donovan, police.....	16 00
	W. H. Strader, police.....	18 00
	Amount carried forward.....	\$1,992 40
		\$8,437 20

Amount brought forward.....	\$1,992 40	\$8,437 1
Oct. 4—Wm. Howe, ticket seller.....	13 50	
Walter Toomey, ticket seller.....	13 50	
Thos. Springer, ticket seller.....	13 50	
A. Spencer, ticket seller.....	13 50	
Geo. King, ticket seller.....	13 50	
Ed. Fulcher, rear porter.....	20 00	
Ben. Bullard, rear porter.....	18 00	
M. Philbrook, messenger.....	18 00	
Nat. Christopher, climbing flag poles.....	10 00	
R. C. Ferguson, contract cleaning grand stand.....	80 00	
J. M. Sullivan, detective.....	45 00	
W. S. Wilkerson, night watchman.....	15 00	
Jno. Shellars, gatekeeper.....	45 00	
J. Phillips, exit gate.....	22 50	
Wm. Basler, exit gate, assistant.....	22 50	
Geo. Ritchie, quarter-stretch gate.....	18 00	
J. T. McNiff, quarter-stretch gate.....	18 00	
C. H. Spencer, quarter-stretch gate.....	18 00	
Dan. Foley, track entrance gate.....	27 00	
A. Greer, back gate.....	18 00	
Frank Paddock, paddock.....	18 00	
Jno. Bryan, assistant paddock.....	18 00	
D. P. Coon, inside track gate.....	18 00	
Jas. Holl, ticket clerk, Twenty-third Street gate.....	27 00	
Geo. McManus, fire watch.....	30 00	
P. O'Meara, fire watch.....	33 00	
John McManus, fire watch.....	33 00	
D. Walker, stairman.....	22 50	
L. A. Spurgeon, detective.....	20 00	
H. Haedrick, team at Park.....	120 00	
F. Van Buren.....	38 00	
A. Grubbs, rear porter Grand Stand.....	22 00	
J. F. Bohn, carpenter and assistant at Park.....	122 00	
G. A. Maxwell, carpenter.....	49 50	
Jos. Sullivan, carpenter.....	4 00	
Wm. Boyle, carpenter.....	2 00	
Henry Haedrick, assisting Perry with chairs, hay, etc.....	8 00	
W. S. Cable and W. H. Baker, assistants to hay team.....	28 00	

PAVILION PAYROLL.

1890.		
Oct. 4—C. K. Dougherty, chief ticket clerk.....	\$60 00	
J. S. Miller, Financial Secretary.....	100 00	
N. J. Toll, entry clerk.....	80 00	
S. L. Howe, entry clerk.....	85 00	
E. Hull, entry clerk.....	85 00	
Alfred Trainer, assistant ticket clerk.....	36 00	
Fred. Gilman, assistant ticket clerk.....	36 00	
A. Keithley, doorkeeper.....	46 50	
W. H. Shea, doorkeeper.....	43 50	
B. F. Tade, doorkeeper.....	43 50	
C. S. Sprague, doorkeeper.....	45 00	
Chas. Schocke, fire watch.....	49 00	
Jos. Carrington, night watch, machinery.....	34 50	
Mrs. L. Bateman, ladies' department.....	54 00	
Mrs. Johnson, ladies' room.....	24 00	
Oscar Addison, laborer.....	17 50	
J. Huston, Jr., laborer.....	34 50	
Chas. Garrett, laborer.....	28 75	
A. J. Danis, laborer.....	28 75	
J. Costra, laborer.....	28 25	
Thos. Kane, laborer.....	15 75	
J. Hennessy, laborer.....	17 50	
E. D. Webb, laborer.....	3 00	
V. F. Taylor, day watch.....	37 50	
Chas. B. Lightfoot, carpenter and assistant Machinery Hall.....	77 00	
O. W. Huston, carpenter.....	58 00	
J. G. Cox, carpenter.....	36 00	
Chas. Stanfield, laborer.....	7 00	
J. R. Haggerty, laborer.....	2 00	
Wm. Jorgensen, Art Gallery and Pavilion.....	27 50	
Amount carried forward.....	\$1,241 00	\$11,505 10

Oct. 4—Amount brought forward.....	\$1,241 00	\$11,505 10
T. T. Burnett, doorkeeper.....	9 00	
C. B. Herndon, doorkeeper.....	9 00	
C. B. Herndon, laborer.....	35 50	
E. M. Atkinson, membership tickets.....	12 00	
Peter A. Byrne, laborer.....	60 25	
S. Addison, laborer.....	63 75	
Thos. Bryor, laborer.....	63 75	
Jas. Strader, laborer.....	63 75	
Wm. Forsyth, laborer.....	58 00	
W. R. Daly, laborer.....	32 50	
Q. Sullivan, laborer.....	55 75	
M. Barry, laborer.....	63 75	
Wm. Keithly, laborer.....	59 00	
Jos. Keyes, laborer.....	61 00	
I. W. Stinson, laborer.....	59 75	
M. J. Rogers, laborer.....	55 75	
W. S. Dodd, laborer.....	20 00	
V. Moreno, laborer.....	43 75	
L. Moreno, laborer.....	34 50	
Ed. Morris, laborer.....	41 00	
H. Butler, laborer.....	41 00	
Jas. W. Bailey, laborer.....	21 50	
F. Ashton, laborer.....	39 00	
C. P. Cook, laborer.....	47 50	
Paul Memegoena, Art Gallery.....	47 50	
Wm. Forsyth, Art Gallery.....	4 00	
F. Ashton, Art Gallery.....	2 00	
Samuel Green, ticket counter.....	24 00	
O. P. Dodge, Assistant Superintendent.....	138 00	
Chas. Hellman, messenger for Dodge.....	6 00	
A. J. Muir, gas man.....	20 00	
Norton Bush, Superintendent Art Department.....	250 00	
Michael Barry, laborer.....	5 00	
James Strader, laborer.....	5 00	
I. W. Stinson, laborer.....	5 00	

\$2,818 25

EXPENSES CONTINUED.

Oct. 4—Vaquero Tournament.....	\$400 00	
S. DeKay, hay for Fair.....	260 75	
Goodwin Bros., subscription Turf Guide.....	10 00	
E. F. Woodward, repairs Park wall.....	14 00	
7—Richards & Knox, lumber.....	287 94	
Whittier, Fuller & Co., diplomas, etc.....	103 60	
J. W. Wilson, account horse hire.....	54 00	
J. Winterburn & Co., electrotype.....	12 00	
A. A. Van Voorhies, team at Park.....	5 90	
Cary R. Smith, cattle judge, expenses.....	26 40	
Wm. Gutenberg, rent of rollers, etc.....	27 50	
Gattman & Wilson, merchandise.....	112 90	
Mrs. C. Gruhler, rent of lot for engines.....	25 00	
H. C. Chipman, race shields.....	1 50	
Capitol Furniture Co., repairing chairs.....	51 15	
Kuhlman, Salz & Co., tanbark.....	60 00	
Hammersmith & Field, tournament medals.....	225 00	
H. S. Crocker & Co., lithographing.....	15 00	
J. F. Hill, repairs harrows, etc.....	77 45	
Huntington-Hopkins Co., repairs, etc.....	18 38	
A. S. Hopkins & Bro., account whitewashing, etc.....	38 05	
Holbrook, Merrill & Stetson, boiler house and repairs.....	29 43	
C. H. Krebs & Co., repairs.....	141 00	
Locke & Lavenson, hose and mats.....	7 00	
Wm. McLaughlin, freight and cartage.....	124 90	
J. A. M. Martin, Park repairs.....	5 00	
Pioneer Box Co., boxing, etc.....	74 00	
B. Ruhl, binding papers.....	25 00	
C. Suter, mill work.....	36 10	
Pacific Electrical Works, bell repairs, etc.....	12 00	
Shaw, Ingram, Batcher & Co., repairs, etc.....	97 20	
Mrs. A. Yule, rent of lot.....	40 00	
George Boyne, decorating.....	330 00	
Capitol Gas Co., gas and electric light.....	1,532 40	
W. A. Scott, Athletic Tournament.....	208 00	
Amount carried forward.....	\$4,488 55	\$14,323 35

TRANSACTIONS OF THE

STATE AGRICULTURAL SOCIETY.

37

	Amount brought forward.....	\$4,488 55	\$14,323 1
st. 9—F. H. Wing, stationery.....	8 50		
W. F. Cutler, rent of lot.....	12 00		
W. F. Cutler, veterinary services.....	30 00		
10—Thos. Lewis, excavating.....	150 00		
E. L. Smith, making badges.....	20 00		
20—M. M. Estee, merchandise.....	40 00		
J. E. La Rue, hay for stock.....	683 73		
J. A. Lafferty, cartage, etc.....	123 00		
George Murray & Son, repairing cesspools.....	25 00		
J. H. Campbell, excavating.....	36 75		
23—H. M. La Rue, Jr., Park payroll.....	10 00		
J. Streiker, alfalfa hay.....	110 00		
31—Western Union Telegraph Co., telegrams and delivery.....	18 65		
S. Eiseman, distributing posters.....	15 00		
Sundries for month.....	74 35		
W. Gardner, merchandise, etc.....	69 50		
J. S. Miller, account error.....	136 15		
Nov. 6—H. F. Pierson, civil engineer, services.....	36 00		
10—Wells, Fargo & Co., expressage on reports.....	10 50		
13—Wm. Curtis, use of team.....	26 00		
Buffalo Brewing Co., ice.....	42 25		
29—A. J. Muir, plumbing.....	392 82		
Sundry bills.....	18 90		
Dec. 16—Miss Hinkson, filling diplomas.....	44 25		
17—Sacramento Lumber Co., lumber at Park.....	360 29		
23—J. Millay, repairs at Park.....	24 00		
26—W. J. O'Brien, repairs at Park.....	42 50		
31—Sundries.....	15 48		
1891.			
Jan. 2—H. S. Crocker & Co., stationery.....	71 15		
Phoenix Mills, merchandise account Fair.....	118 10		
E. F. Smith, incidentals.....	62 00		
T. N. Dunphy, bill posting.....	18 00		
William Caswell, bill posting.....	58 70		
12—Testimonial, Superintendent of Track.....	100 00		
A. J. Muir, plumbing at Park.....	21 10		
W. T. Duncan, hay for team.....	31 50		
Haedrick & Son, teams for track.....	48 00		
26—Subscriptions, turf journals.....	14 00		
31—Sundries for month.....	36 88		

PREMIUMS.

1890.			
Feb. 28—Sundry of 1889.....	\$40 00		
May 24—Sundry of 1889.....	2 50		
Aug. 5—Capital Soap Company, account 1889.....	15 00		
Sept. 5—Winnie Clark, account of Ladies' Tournament, 1889.....	10 00		
Oct. 4—Matteson & Williamson, account 1889.....	1 00		
B. Quarles, account 1889.....	2 00		
First Department.....	7,524 00		
Second Department.....	894 00		
Third Department.....	594 00		
Fourth Department.....	984 00		
Fifth Department.....	739 00		
Sixth Department.....	852 50		
Seventh Department.....	1,100 00		
Eighth Department.....	1,600 00		
7—Miss Lemay, first prize, Ladies' Tournament.....	60 00		
Miss Lemay, special.....	50 00		
Mrs. J. M. Collier, second prize, Ladies' Tournament.....	45 00		
Miss Grace Dixon, fourth prize, Ladies' Tournament.....	25 00		
Miss May Foss, fifth prize, Ladies' Tournament.....	20 00		
Miss A. Kemler, sixth prize, Ladies' Tournament.....	15 00		
Miss L. Aubertis, eighth prize, Ladies' Tournament.....	10 00		
Miss Effie Klemp, first misses' prize.....	27 50		
Miss Edith Bradley, second misses' prize.....	27 50		
Miss Mabel Fay, third misses' prize.....	20 00		
Miss B. Quarles, fourth misses' prize.....	15 00		
Miss Daisy Logan, fifth misses' prize.....	10 00		
Dec. 4—W. K. Vanderslice, medals.....	1,128 45		

Amount carried forward.....

\$15,78

\$37,72

Amount brought forward..... \$37,728 40

RACES—1890.

Race No. 1—Stakes.....	\$1,535 00
2—Purse.....	576 00
3—Purse.....	800 00
4—Stakes and added money.....	620 00
5—Stakes and added money.....	1,345 00
6—Stakes and added money.....	850 00
7—Purse.....	300 00
8—Stakes.....	305 00
9—Purse.....	800 00
10—Purse.....	1,000 00
11—Stakes and added money.....	870 00
12—Stakes and added money.....	1,000 00
13—Stakes and added money.....	700 00
14—Purse.....	350 00
15—Purse.....	600 00
16—Purse.....	640 00
17—Purse.....	1,000 00
18—Stakes and added money.....	1,060 00
19—Stakes and added money.....	920 00
20—Stakes and added money.....	600 00
21—Stakes and added money.....	490 00
22—Purse.....	300 00
24—Purse.....	1,200 00
25—Purse.....	1,000 00
26—Stakes and added money.....	1,400 00
27—Stakes and added money.....	1,405 00
28—Stakes and added money.....	555 00
29—Stakes and added money.....	920 00
30—Purse.....	300 00
32—Purse.....	1,000 00
33—Stakes.....	400 00
34—Stakes.....	275 00
Special—Purse, pacing.....	600 00
Special—Purse, trotting.....	500 00
Special—Purse, trotting.....	400 00
Special—Purse, pacing.....	400 00

\$27,016 00

BUILDING AND IMPROVEMENTS.

April 17—C. B. Lightfoot, building boiler house.....	\$100 00
June 2—J. A. Penman, books for Library.....	40 00
Sept. 12—A. H. Anderson, painting new stalls.....	41 50
23—J. F. Bohn, new stalls.....	595 50
Oct. 6—Richards & Knox, lumber.....	87 10
7—Huntington-Hopkins Co., mdse., etc.....	40 20
Holbrook, Merrill & Stetson, boiler house.....	399 97

\$1,804 27

INSURANCE.

Aug. 4—A. G. Hoagland, agent, insurance on Pavilion.....	\$20 00
Sept. 23—Brand, Lawton & Co., agents, insurance on Park and Pavilion.....	60 00
29—C. H. Denton, agent, insurance on Park and Pavilion.....	50 00
H. Kimbrough, agent, insurance on Pavilion.....	40 00
Oct. 4—Mills & Hawk, agents, insurance on Park and Pavilion.....	153 75
W. P. Coleman, agent, insurance on Park and Pavilion.....	245 00
L. C. Chandler, agent, insurance on Pavilion.....	45 00
Sweetser & Co., agents, insurance on Pavilion and Park.....	103 80
7—E. K. Alsip & Co., agents, insurance on Pavilion and Park.....	150 00
Oct. 8—J. N. Porter, agent, insurance on Park and Pavilion.....	150 00
10—F. Hickman, agent, insurance on Park and Pavilion.....	103 75
A. Leonard & Son, agent, insurance on Park and Pavilion.....	116 25
21—L. C. Chandler, agent, insurance on Pavilion.....	45 00
Nov. 24—H. J. Goethe, agent, insurance on Park and Pavilion.....	112 50
Dec. 1—Carl Strobel, agent, insurance on Park and Pavilion.....	60 00

\$1,455 05

Amount carried forward.....

\$67,503 72

Amount brought forward..... \$67,508

INTEREST.

May 8—D. O. Mills & Co., to April 30.....	\$96 83
Sept. 30—Friend & Terry Lumber Co., on note.....	96 18
Capital Gas Co., on note.....	125 48
Richards & Knox, on note.....	89 33
W. K. Vanderslice & Co., on note.....	38 97
D. O. Mills & Co., account interest.....	152 38
Oct. 4—Sacramento Lumber Co., on note.....	70 30
1891.	
Jan. 31—D. O. Mills & Co., September to January, inclusive.....	168 50

\$887

SALARIES.

Edwin F. Smith, Secretary.....	\$2,400 00
A. J. Hopper, assistant.....	300 00
James Muir, janitor.....	900 00
H. Clock, watchman.....	600 00
P. D. Gunter, trackman, nine months.....	510 00
H. Haedrick, trackman, two months.....	132 00
H. H. Hummel, stenographer.....	219 00
S. B. Payne, stenographer.....	55 40
Patten, trackman.....	48 00

\$5,164

BILLS PAYABLE.

Sept. 30—Friend & Terry Lumber Co., account 1889.....	\$1,202 26
Capital Gas Co., account 1889.....	1,568 30
Richards & Knox, account 1889.....	1,116 65
W. K. Vanderslice & Co., account 1889.....	742 32
Sacramento Lumber Company.....	878 78

\$5,508

ENTRANCES DUE.

Oct. 4—J. C. Moran, on "McGinty".....	\$80 00
J. N. Van Winkle, on "Silverbow".....	30 00
A. Hiller, on "Achilles".....	30 00
Wyatt Earp, on "Jim Leach".....	100 00
E. B. Gifford, on "Larco".....	100 00
J. C. Moran, on "Wallie".....	100 00
P. Siebenthaler, on "Sheridan".....	35 00
A. B. Anderson, on "Four Aces".....	17 50
A. Hiller, on "Achilles".....	35 00
N. A. Covarrubias, on "Dan M. Murphy".....	35 00
E. B. Gifford, on "Bob Mason".....	100 00
J. C. Moran, on "Ed Fay".....	100 00
A. B. Anderson, on "Four Aces".....	30 00
R. H. Wallon, on "Argent".....	120 00
E. B. Gifford, on "Larco".....	120 00
L. H. Boggs, on "Keepsake".....	100 00
W. Hackett, on "Iram".....	100 00
J. C. Moran, on "Ed Fay".....	100 00
E. B. Gifford, on "Bob Mason".....	100 00
L. H. Boggs, on b. s. "Keepsake".....	80 00

\$1,513

FIXED EVENTS.

Occident Stake, 1890—Account collections 1887-8-9.....	\$1,405 00
President's Stake, 1890—Account collections 1888-9.....	325 00
California Breeders' Stake, 1890—Account collections 1889.....	90 00
Running stake, 1890.....	120 00

\$1,940

PARK AND PAVILION RECEIPTS.

Rebates, account life memberships..... \$10

BANK.

D. O. Mills & Co., account 1889..... \$6,14

Amount carried forward..... \$88,625

Amount brought forward..... \$88,625 76

SPRING MEETING.

May 31—Race No. 1—Added money and stakes.....	\$505 00
2—Added money and stakes.....	1,230 00
3—Purse.....	400 00
4—Added money and stakes.....	985 00
5—Added money and stakes.....	1,410 00
6—Added money and stakes.....	920 00
7—Added money and stakes.....	430 00
8—Added money and stakes.....	1,220 00
9—Added money and stakes.....	350 00
10—Forfeits.....	335 00
11—Added money and stakes.....	1,240 00
12—Purse.....	400 00
13—Added money and stakes.....	1,225 00
14—Added money and stakes.....	635 00
15—Stakes.....	695 00
16—Added money and stakes.....	470 00
Special—Purse.....	300 00
Advertising.....	676 30
Poster work.....	205 00
Music, Artillery Band.....	164 00
Payroll, account Spring Meeting.....	311 00
H. S. Crocker & Co., printing, Spring Meeting.....	31 25
J. W. Wilson, horse hire.....	8 00
Sacramento Transfer Co., cartage.....	3 00
Postage, account posters.....	16 00
Sundry small accounts.....	49 60
Bill posting, State.....	22 65

\$14,736 80

1891.

Jan. 31—Cash balance..... 253 72

\$103,616 28

PARK AND PAVILION DAILY RECEIPTS.

	Pavilion.	Park.
Sept. 8—Ticket sales.....	\$1,040 00	-----
9—Ticket sales.....	1,205 00	-----
10—Ticket sales.....	1,108 25	-----
11—Ticket sales.....	1,166 75	\$1,378 25
12—Ticket sales.....	789 00	1,112 50
13—Ticket sales.....	764 25	882 50
15—Ticket sales.....	1,074 75	1,340 50
16—Ticket sales.....	954 50	1,295 50
17—Ticket sales.....	1,354 50	1,373 50
18—Ticket sales.....	1,522 25	2,380 50
19—Ticket sales.....	1,080 25	2,028 50
20—Ticket sales.....	872 00	1,231 50

\$12,981 50

\$13,023 25

Privileges, programmes, etc..... 842 25 7,572 93

Office collections, account life membership, sale seats, etc..... 300 00 643 00

Totals..... \$14,073 75 \$21,239 18

PROFIT AND LOSS ACCOUNT.

Dr.

Balance February 1, 1890	\$12,628 08	
Building and improvements	1,304 27	
Interest	837 97	
Insurance	1,455 05	
Salaries	5,164 40	
Advertising	2,220 35	
Expenses	19,746 60	
Taxes	9,633 50	
Premiums	15,761 45	
Rebates, Pavilion and Park receipts	18 00	
		\$68,769

Cr.

Rent	\$4,060 00	
Park and Pavilion receipts	35,312 93	
Appropriation	17,500 00	
Expense rebates	466 59	
Liabilities February 1, 1891	11,430 10	
		\$68,769

ANNUAL MEETING.

The Board of Directors of the State Agricultural Society held their annual meeting at the Secretary's office on Tuesday, February 3, 1891. Present—Directors Boggs, Chase, La Rue, Carr, De Long, Hancock, Cox, Hardison, Gamble, Shippee, and President Green.

Messrs. W. L. Hardison, of Santa Paula, Ventura County, and Samuel Gamble, of San Mateo, were named by the Governor as Directors, vice P. A. Finigan and E. C. Singletary, respectively.

After consideration of matters of minor importance, the annual report of the Board for the fiscal year ending February first, was taken up, read, adopted, and ordered printed.

ELECTION OF OFFICERS.

The Board proceeded to the election of officers for the current year.

For President, Director Carr nominated Hon. Frederick Cox.

Director Cox stated that, inasmuch as he contemplated an absence from the State soon, he did not think it wise to select him for this important position, as in all probabilities his absence would cover the period of the State Fair. He would, therefore, prefer the selection of some other member. He, however, would not decline the nomination, but desired it to be understood that in case he was compelled to be away that the Board would accept his resignation without prejudice.

After discussion, the Directors concluded to accept the situation and abide the result; whereupon, Mr. Cox was unanimously chosen President. Upon taking the chair he assured the Board that his efforts would be to continue the Society in a progressive way, and if he was capable of conducting the affairs in as able a manner as his predecessor, he would feel satisfied, and knew the Board would commend his efforts. He bespoke a bright future for the Society, and hoped that it would continue for many years. He gave a history of his connection with the State Society, that dated from something over twenty years past, and assured the members that whether in the Directory or out of it he had the same feelings of interest for its success. He promised to devote his personal attention to the affairs in general, and asked the able assistance of the Board in making the coming season one of the most prosperous in the history of this Society.

Director Boggs moved that a vote of thanks be tendered to retiring President Green, for the able manner in which he had presided over the affairs of the Society for the past two years.

In his remarks he highly commended the executive ability of the retiring officer, and claimed that his administration had not only been successful, but most acceptable to the Board and community at large.

Ex-President Green returned thanks to the Board for their esteem and confidence expressed.

Director Chase nominated Hon. H. M. La Rue for Superintendent of the avilion.

Upon motion, the nomination was made unanimous. G. W. Hancock, Esq., was unanimously chosen Superintendent of the ark.

WORLD'S FAIR APPROPRIATION.

After discussion, the following memorial to the Legislature respecting the appropriation for the World's Fair was formulated, and ordered to be transmitted to the Senate and Assembly:

To the honorable the members of Senate and Assembly of the twenty-ninth session of the Legislature of California:

GENTLEMEN: We have the honor to present the following resolution, adopted by the State Board of Agriculture, at their annual meeting held February 3, 1891:

WHEREAS, There is to be held in Chicago, Illinois, during the year 1893, an exhibition known as the World's Columbian Exposition, whereat the State of California has been invited to make an exhibit of her products; and whereas, we believe the opportunity thereby presented to display our agricultural, mineral, and mechanical products is one that should be unhesitatingly accepted by the producers of California, to show to the world the rich and varied capacities of our State; therefore,

Resolved, That it is the sense of the State Board of Agriculture, that California be properly represented in the Columbian Exposition, and that we hereby memorialize the Legislature, now in session, to appropriate an adequate amount of money to enable the State to have such representation as the importance of her resources merits.

FRED'K COX, President.

EDWIN F. SMITH, Secretary.

STATE FAIR OF 1891.

Upon motion of Director Chase, the dates for the California State Fair were fixed as follows: Beginning the first Monday in September and continuing until the nineteenth (two weeks).

SPRING MEETING.

In reference to the holding of a spring race meeting, the matter was fully discussed, and the Secretary was asked for a statement of the meeting held last spring. It was shown thereby that the amount in excess was but \$973 45, and was shown that unless the Society's funds were used, it would not be possible to hold a meeting this year. The Board opposed the use of State money for this purpose, and upon motion of Director Chase, the subject-matter was referred to a special committee consisting of President, Secretary, and Directors Hancock, La Rue, and Green, to ascertain if a sufficient amount of money could be obtained by subscription; if so, the amounts received and on hand could be transferred to a local organization, it being the sense of the Board that the Society should not give a race meeting.

TROTTING STAKES.

Upon motion, the usual trotting stakes for two, three, and four-year-olds were ordered to be closed in March, and two additional stakes for racing in two and three-year old forms were ordered to be given at the same time.

STALLION PURSE.

Upon motion of Director La Rue, a stallion purse of \$2,500 for 2:18 class, with the following conditions, was ordered opened:

Entrance 10 per cent, of which $2\frac{1}{2}$ per cent must accompany nomination; 5 per cent payable April first, and the remaining $2\frac{1}{2}$ per cent September 1, 1891. The purse to be divided as follows: \$1,500 to first, \$750 to second, and \$250 to third. The failure to meet installments as they become due, declares entry out and releases nominator from further obligation.

Six to enter, three to start (if but two start, they may contest for entrance money, to be divided two thirds and one third), otherwise National Trotting Association rules to govern.

Entries to close with the Secretary, February 28, 1891.

STATE FAIR FUTURITY STAKE.

The Board resolved to offer a California State Fair Futurity Stake, with the following conditions:

For colts, fillies, and geldings—the produce of mares that may be entered in this stake—to trot as two-year olds at the State Fair of 1893, and as three-year olds at the State Fair of 1894. The first race to be mile heats, two in three; and the second, mile heats, three in five.

On or before March 16, 1891, the mares whose foals may become eligible to start in these races must be nominated, and any mare that has foaled, or is due to foal in 1891, is eligible. The stake to be worth \$7,500, of which \$2,500 will go to the two-year olds, and \$5,000 to the three-year old race, as follows: In the two-year old event the winner will receive \$1,500; the second colt, \$600; the third colt, \$250; and \$150 to the nominator of the dam of the winner. The three-year old winner will receive \$3,000; the second, \$1,250; the third, \$500; and \$250 to the nominator of the dam of the winner. Entrance as follows: \$10 to nominate the mare on March 16, 1891; \$15 November 1, 1891, when foal must be named and described, and all colts thus named and paid on shall be eligible to start in either or both events, without further payment until June first of the year of race.

Those desirous of starting in the two-year old race shall, on June 1, 1893, name their colts, and pay \$25 (and as many can be thus named and paid on as the owners desire to keep in). On the starters \$50 more must be paid by six o'clock P. M. the evening before the race. If less than three start, those starting and the nominator of the winner's dam will receive only the money that each would receive had three horses been placed, and the residue of the \$2,500 be carried over to the three-year old race.

Those desiring to start as three-year olds shall, on June 1, 1894, name (as in the two-year old event) and pay \$50, and those who start must pay \$100 more by six P. M. day before race. In case of a walk-over in the three-year old event, the winner shall receive the \$7,500, less the amount paid the two-year olds, and that paid nominators of winners' dams. N. T. A. rules to govern.

If a mare proves barren, or slips, or has a dead foal, or twins, or if either the mare or foal dies before November 1, 1891, the entry is void, and the money paid shall be returned. In entries the name, color, and pedigree of mare must be given; also, the name of horse to which she was bred in 1890.

Address all nominations to the Secretary.

Upon motion, the Board adjourned to March 18, 1891.

EXHIBITS AT THE FAIR—1890.

FIRST DEPARTMENT.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
CLASS I.—THOROUGHBRED HORSES.					
<i>Stallions—Four years old and over.</i>					
Bay	Imported Cheviot	Traducer	Idalia	W. G. Ross	San Francisco.
Chestnut	Prince of Norfolk	Norfolk	Marion	W. B. Todhunter	Sacramento.
<i>Stallions—Three years old.</i>					
Chestnut	Flambeau	Wildile	Imported Flirt	Leland Stanford	Palo Alto.
<i>Stallions—Two years old.</i>					
Bay	Aristocrat	Flood	Cuba	W. M. Murry	Sacramento.
Black	Power	Powhatan	Lawn Tennis	W. M. Murry	Sacramento.
Chestnut	Narvaez	Frank Rhoads	Aunt Jane, by Bazaar	F. P. Lowell	Sacramento.
Sorrel	Daniel S	Joe Daniels	Maggie S	C. Halverson	Routiers.
Bay	Duke of Milpitas	Duke of Norfolk	Gypsey	William Boots	Milpitas.
	Sir Walter	Nathan Coombs	Bessie	William Boots	Milpitas.
<i>Stallions—One year old.</i>					
Sorrel	Zaldivar	Joe Hooker	Clara L.	W. M. Murry	Sacramento.
Chestnut	Laurelwood	Joe Hooker	Lena's First, by Bazaar	W. F. Smith	Sacramento.
Chestnut		Joe Hooker	Neilsen	W. L. Appleby	Santa Clara.
<i>Colts—Under one year.</i>					
Chestnut	Golden Eagle	Prince of Norfolk	Irene Harding	W. F. Smith	Sacramento.
Bay		Hidalgo.	Maggie S	C. Halverson	Routiers.
<i>Mares—Four years old and over, with sucking colt.</i>					
Sorrel	Nellie Fashion and colt.	Bazaar	Lady Fashion	Mrs. Alice Cutler	Sacramento.
Bay	Maggie S and colt.	Bayonet	By Joe Stoner	C. Halverson	Routiers.
Bay	Irene Harding and colt	Jack Malone	Macaria	C. Halverson	Routiers.
<i>Mares—Four years old and over.</i>					
Chestnut	Annie Laurie	Hubbard	Mayflower	W. F. Smith	Sacramento.
Bay	Isabella	Norfolk	Maggie S	C. Halverson	Routiers.
Bay	Irene Harding	Jack Malone	Macaria	C. Halverson	Routiers.
<i>Mares—Three years old.</i>					
Chestnut	Fabiola	Warwick	Maggie S	C. Halverson	Routiers.
Chestnut	Minuet	Rayon D'Or	Reel Dance	L. J. Rose	San Gabriel.
Bay	Forma	Inauguration	Beauty	William Boots	Milpitas.
<i>Mares—Two years old.</i>					
Black		Hindoo	Katie, by Lexington	L. J. Rose	San Gabriel.
Brown		Hindoo	Bourbon Belle	L. J. Rose	San Gabriel.
Bay	Emma D	Monarch	Maid, by King Alfonso	J. B. Ramsey	Meridian.
<i>Mares—One year old.</i>					
Bay		Pat Malloy	Destitution	L. J. Rose	San Gabriel.
Chestnut		St. Blaize	Ola Tipa	L. J. Rose	San Gabriel.
Bay		Sam Brown	Belladonna	L. J. Rose	San Gabriel.
Chestnut	Blondinette.	Joe Hooker	Marguerite	W. F. Smith	Sacramento.
FAMILIES.					
<i>Dam—With not less than two of her colts, all thoroughbred.</i>					
Bay	Maggie S.	Bayonet	By Joe Stoner	C. Halverson	Routiers.
Bay	Isabella, Fabiola, Daniel S.	Jack Malone	Macaria	C. Halverson	Routiers.
<i>Stallion—Other than thoroughbred, with not less than five of his colts, open to all.</i>					
Brown	Earl of Derby and five colts	Lord Derby	Maggie	R. G. McKenzie	Nicolaus.
Brown	Eros (5826)	Electioneer	Sontag Mohawk	La Siesta Ranch	Menlo Park.
Bay	Wanda, Mariquita, Daylight, Luck, Sausalito.	Nutwood	By Chieftain	J. A. McCloud	Stockton.
Bay	Daisy Vernon, Hattie Vernon, Sadie Vernon, Maud Vernon, John Vernon, Alex. Vernon, Alice Vernon, Wood Vernon, Stockton Vernon.				
Black	Director and seven colts	Dictator	Dolly	Pleasanton S. F'm	Pleasanton.
Bay	Utile and five colts (imp.)		Rebecca	Voorhies & Barney	Sutter Creek.
Bay	Buccaneer, Jr., and five colts.	Buccaneer (5556)		A. D. Miller	Walsh Station.

Color.	Name.	Stre.	Dam.	Owner.	Residence.
	<i>Dam—Other than thoroughbred, with not less than two of her Colts.</i>				
Bay	Lady Nutwood and four colts.	Nutwood (800)	Lady Mc, by Am. Boy	E. Topham	Milpitas.
Bay	Lena Bowles and three colts.	Gladiator, Jr.		B. E. Harris	San Francisco.
Sorrel	May Fatchen and two colts.			J. P. Callendine	Sacramento.
Bay	Mettie and two colts.			F. W. Midgley	Carbondale.
Brown	Brown Jennie	Dave Hill, Jr.	Old Jennie	J. L. McCord	Sacramento.
	Ned Winslow (2:17½), Mary Lou (2:22½), Shylack Benton.	Chieftain		Jos. Heintz	Sacramento.
Sorrel	Kate				
	Selim, Seebv.	The Moor	Bellevue Maid	W. F. Smith	Sacramento.
Gray	Belle Blanche.			Parsons & Griffith	Geyserville.
Brown	Remora, Barabbas.	Wellington			
Gray	Lady B (483)	Nutwood	By Stockbridge Chief, Jr.	La Sesta Ranch	Menlo Park.
	Oleta	(In French)		J. C. Smith	Oakland.
Gray	Clovewood, Sausalito.				
Gray	Theresa (17855)				
Gray	Magnet, Maud.	(In French)		Voorhies & Barney	Sutter Creek.
Bay	Pattie and two colts.	Model Prince	By Imp. Glancer	T. A. Nufer	Concord.
Gray	Jule and three colts.			W. J. O'Brien	Sacramento.
Gray	Maggie A and two colts.	Normandy	Nellie	R. J. Merkle	Sacramento.
Black	Funchon and three colts.				
	<i>CLASS II—STANDARD TROTTERS.</i>				
	<i>Stallions—Four years old and over.</i>				
Gray	Berlin (3514)	Blackbird	Addie Lee	H. S. Beals	Sacramento.
Black	Noonday (10000)	Wedgewood (2:19)	Noontide (2:20½)	F. P. Lowell	Sacramento.
Bay	Albenton (4023)	Gen. Benton	Abbie, by Almont	W. S. Enos	Independence.
Brown	Eros (5326)	Electioneer	Sontag Mohawk	La Sesta Ranch	Menlo Park.
Bay	Clay Duke (2757)	Alcona	Metamora	J. W. Martin	Woodland.
Chestnut	Del Rey (7084)	Clay Duke (2757)	Madonna	J. W. Martin	Woodland.
Bay	Ibex	Com. Belmont	By Tomahawk	M. Garoutte	Woodland.
Bay	Mt. Vernon (2:21) (Vol. IX)	Nutwood (800)	By Chieftain	J. A. McCloud	Stockton.
Bay	Alcona, Jr. (2785)	Alcona	Madonna	J. P. Rodehaver	Petaluma.
	<i>Stallions—Three years old.</i>				
Bay	Falrose (12568)	Fallis (2:23)	Roseleaf	F. P. Lowell	Sacramento.
Chestnut	Bozero (8560)	Prompter	Mary	Dr. C. E. Pinkham	Sacramento.
Bay	Proofreader (8144)	Sterling	Empress	M. W. Hicks	Sacramento.
	<i>Stallions—One year old.</i>				
Bay	Kebir (13107)	Alcazar	Yerba Santa	W. F. Smith	Sacramento.
Bay	Racemede (12578)	Prompter	Empress	M. W. Hicks	Sacramento.
Bay	Duster (12300)	Sterling (6223)	Neillie Arch	M. W. Hicks	Sacramento.
Bay	Sausalito (9843)	Eros	By Nutwood	La Sesta Ranch	Menlo Park.
	<i>Suckling Colts.</i>				
Gray	Barabbas (13108)	Albert W	Belle Blanche	W. F. Smith	Sacramento.
		Eros	By Nutwood	La Sesta Ranch	Menlo Park.
	<i>Gelding.</i>				
	Daylight (Vol. IX)	Eros	By Chieftain	La Sesta Ranch	Menlo Park.
	<i>Mares—Four years old and over, with sucking colt.</i>				
Bay	Jennie B and colt.	Berlin	Malicia	H. S. Beals	Sacramento.
Gray	Belle Blanche and colt (Vol. IV)	The Moor	Bellevue Maid	W. F. Smith	Sacramento.
Black	Pansy (2:24½) (Vol. VII) and colt Surge	Berlin	Lady Hubbard	W. F. Smith	Sacramento.
Gray	Oleta and colt (Vol. IX)	Nutwood	By Stockbridge Chief, Jr.	La Sesta Ranch	Menlo Park.
	<i>Mares—Four years old and over.</i>				
Chestnut	Madame Nelson (Vol. IX)	John Nelson (187)	By Blackbird	J. P. Callendine	Sacramento.
	Lady Grosvenor	Grosvenor	Lady Nutwood	E. Topham	Milpitas.
	Mariquita	Eros	By Chieftain	La Sesta Ranch	Menlo Park.
	<i>Mares—Three years old.</i>				
	Sylvia	Grosvenor	Lady Nutwood	E. Topham	Milpitas.
	<i>Mares—One year old.</i>				
Chestnut	Abbie Woodnut (Vol. IX)	Woodnut	Phyllis	J. P. Callendine	Sacramento.
Bay	Thuja	Sterling	Olive	Dr. C. E. Pinkham	Sacramento.
Gray	Remora (Vol. IX)	Guy Wilkes	Belle Blanche	W. F. Smith	Sacramento.
Bay	Posey (Vol. IX)	Sterling	Clarabel	M. W. Hicks	Sacramento.
	Luck	Eros	By Nutwood	La Sesta Ranch	Menlo Park.
	Lady Thorne	Thornhill	Lady Nutwood	E. Topham	Milpitas.
	<i>Mares—Suckling colts.</i>				
Bay	Abaca Wilkes (Vol. IX)	Calabar (8559)	Madame Nelson	J. P. Callendine	Sacramento.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
CLASS III—BOARDSTERS.					
<i>Stallions—Four years old and over.</i>					
Sorrel	Somerseset Prince	Dexter Prince	By Chieftain	C. H. Corsan	Lodi.
Black	Billy Tinker	Darwin	Black Bess	J. C. Smith	Oakland.
Bay	Bay Pride	Bay Rose	Algona mare	Geo. Collins	Fresno.
Bay	Alcantara, Jr.	Alexandra	Juice	J. B. Ramsey	Meridian.
Brown	Comet	Alex Buton	Susie Hamilton	Knights Landing.	
Bay	Nutgrove	Grosvenor	Lady Nutwood	E. Topham	Milpitas.
Gray	Buccaneer, Jr.	Buccaneer	Rebecca	A. D. Miller	Walsh Station.
	Gold Drop	Buccaneer, Jr.	Eureka	A. D. Miller	Walsh Station.
<i>Stallions—Three years old.</i>					
Bay	Falliston.	Fallis	Bay Kate	W. S. Enos	Independence.
Black	Duke Cameo	Jim Mulvanna	Nettie	A. Herold	Sacramento.
Black	Belvidere	Le Grande	Sunny Slope Belle	Matl. Storn.	Sacramento.
<i>Stallions—Two years old.</i>					
Iron gray	Hank Small	Berlin	Lady L.	W. W. Coons	Sacramento.
Chestnut	Sir Elmo	Elmo	Dolly	Stoddart & De Gomas	Sacramento.
Bay	Hock Wilkes	Guy Wilkes	Thoroughbred mare	W. F. Smith	Auburn.
Brown	Sid	Sydney		W. F. Smith	Sacramento.
Black	Willard Wilkes	Alcantara, Jr.	Racquet	J. B. Ramsey	Meridian.
Black	Young Tilton	Apex	Kale Bender	S. K. Freery	Sacramento.
Bay	Calaveras	Tilton Almont	By Oregon Greyhound	Stephen Baker	Grimes.
Chestnut		Hawthorne	By Muldoon	Wm. Sayles	Mokelumne Hill.
<i>Stallions—One year old.</i>					
Black	Hogaboom	Waldstein	By Milton S. Latham	W. Gardner	Sacramento.
Sorrel	Hickory Nut	Ross S	By Geo. Moore	E. Pickett	Elk Grove.
Chestnut	King of the Ring	Silver King	Nighthawk	W. F. Smith	Sacramento.
Black	Sport	Prompter	Clara	M. W. Hicks	Sacramento.
Bay	John H.	Clay Duke		J. W. Martin	Woodland.
Bay	Wood Vernon	Mt. Vernon	By Gen. Dana	I. A. McCloud	Stockton.
Gray	Boulianger	Junio	Peg	R. McEnespy	Chico.
Brown		Berlin	Nelson mare	C. Ackerman	Sacramento.
		Seven Oaks	Elmorne	B. E. Harris	San Francisco.
<i>Stallions—Suckling colts.</i>					
Bay	Cal Marvin	Don Marvin (7927)	May Patchen	J. P. Callendine	Sacramento.
Bay	Chico	Junio	Peg	R. McEnespy	Chico.
Bay	Cannon	Mountain Boy	Mabel Echo	W. A. Gamble	Sacramento.
	Douglas	Redwood	Lena Bowles	B. E. Harris	San Francisco.
	You Bet	Buccaneer, Jr.	White Stockings	A. D. Miller	Walsh Station.
<i>Geldings.</i>					
Brown	Dexter	Dexter Prince	By Joe Daniels	W. Gardner	Sacramento.
Bay	Albert S.	Whipple's Hambletonian	By Blackhawk	J. D. Smith	Sacramento.
Black	Hollywood	Victor	Thoroughbred	Miss N. J. Ryan	Sacramento.
Bay	Billy Rawson	Victor	By Young St. Clair	J. W. Martin	Woodland.
Black	Rinsey	Victor	Rosedale	L. Deitz	Woodland.
	Harry Mc.	Alex Buton		B. E. Harris	San Francisco.
	You Know	Prompter	By Smoky Boy	A. D. Miller	Walsh Station.
	Little Phil	Dave Hill, Jr.	By St. Clair	Geo. C. McMullin	Sacramento.
	Billy O'Brien			C. S. Crittenden	San Francisco.
	Kilrush			E. Openheim	Sacramento.
<i>Mares—Four years old and over, with suckling colt.</i>					
Chestnut	Crescent and colt	Prompter	Starlight	Dr. C. E. Pinkham	Sacramento.
Bay	Mabel Echo and colt	Echo	Sister to Ruth Ryan	W. A. Gamble	Sacramento.
Bay	Lena Bowles and colt	Ethan Allen	Lady Schaffer	B. E. Harris	San Francisco.
	Junio and colt.	Prompter	Rebecca	A. D. Miller	Walsh Station.
<i>Mares—Four years old and over.</i>					
Bay	Lucy	Dom Pedro	Lucy	J. P. Callendine	Sacramento.
Brown	Maggie Dear	Berlin	By Western	W. S. Schaffer	Union House.
Bay	Belle Patchen	Victor	Fillet	W. J. Irvine	Sacramento.
Red	Red Wing	Red Line		W. F. Smith	Sacramento.
Brown	Lady Turner	Singleton	By Black Hawk	O. W. Turner	Chico.
Bay	Duchess	Elmo (891)	Nora Marshall	La Sesta Ranch	Menlo Park.
Bay	Maid of Killarney	Killarney	By Fred Low	Miss N. J. Ryan	Sacramento.
Gray	Geneva	Killarney	Kie Kirkman	J. R. Jacobs	Knights Landing.
Sorrel	Big Lize	Brigadier	Hugh Casey	W. A. Gamble	Sacramento.
Bay	Hernan Allen	Grosvenor	Ethan Allen mare	E. Topham	Sacramento.
Bay	Lady Grosvenor	Adventure	Lady Nutwood	B. E. Harris	Milpitas.
	Freena Froma		Blue Grass		San Francisco.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
	<i>Mares—Three years old.</i>				
Dun	Brilliantine	Brilliant	By Prompter	S. H. Hoy	Winters.
Brown	Marina	Como	By Prompter	W. F. Smith	Sacramento.
Bay	Zalph	Prompter	By Chiefman, Jr.	Z. Ebner	Sacramento.
Chestnut	Sadie Vernon	Mt. Vernon	By Langford	J. A. McCloud	Stockton.
Bay	Haughty Girl	Killarney	Mattie Howard	J. F. Childs	Davis.
Bay	Lizzie F.	Electer	Lady Nutwood	L. Funk	Stockton.
Bay	Sylva	Grosvenor	St. Clair mare	E. Topham	Milpitas.
Bay	Lady Emma	Adonis	Madame Buckner	W. H. Devine	Sacramento.
Brown	Adelia	Brilliant		T. C. Snider	Sacramento.
	<i>Mares—Two years old.</i>				
Bay	Emma Skaggs	Berlin	Emma Skaggs	H. S. Beals	Sacramento.
Bay	Tracee	Sterling	Thoroughbred	W. F. Smith	Sacramento.
Brown	Daisy Vernon	Mt. Vernon	By Berkeley	J. A. McCloud	Stockton.
Bay	Maud Vernon	Mt. Vernon	By Gen. McClellan	J. A. McCloud	Stockton.
Bay	Hattie Vernon	Mt. Vernon	By Chiefman, Jr.	J. A. McCloud	Stockton.
Sorrel	Lillian Smith	Clay Duke		J. W. Martin	Woodland.
	<i>Mares—One year old.</i>				
Bay	Fay Fallis	Fallis	May Patchen	J. P. Callendine	Sacramento.
Bay	Madame	Ben Crocker		W. F. Smith	Sacramento.
Sorrel	Minnie C.	Ross S.	Minnie S.	C. P. Malcolm	Sacramento.
Bay	Rose	Berlin	By Leinster	T. C. Perkins	Perkins.
Black	Easter Belle	Costello	May	J. H. Allen	Sacramento.
Bay	Lady Thorne	Thornhill	Lady Nutwood	E. Topham	Milpitas.
Bay	Sidena	Sidney	Lena Bowles	B. E. Harris	San Francisco.
Bay	Lady Bird	Prompter	Susie Firt	T. C. Snider	Sacramento.
	<i>Mares—Suckling colts.</i>				
Bay		Berlin	Jennie B.	H. S. Beals	Sacramento.
	CLASS IV—CLEVELAND BAYS AND FRENCH COACH.				
Cl. bay	Stallions—Four years old and over.	Bradgate	By Prince Frederick	W. J. Prather	Fresno.
	<i>Stallions—Three years old.</i>				
Cl. bay	Scampton Swell (588)	Favorite	By Wonderful	W. J. Prather	Fresno.
Cl. bay	Loyalty (588)	Lord Stampsfield	By Captain Cook	Wm. Wilkinson	Fresno.
	<i>Mares—Four years old and over, with suckling colt.</i>				
Cl. bay	Roseleaf and colt	Sportsman	By Richmond Lad	W. J. Prather	Fresno.
	<i>Mares—Four years old and over.</i>				
Cl. bay	Queenie	Sportsman	By Barney	W. J. Prather	Fresno.
Cl. bay	Phantom	Lord Cleveland		Wm. Wilkinson	Fresno.
	<i>Mares—Three years old.</i>				
Cl. bay	Rellington Lassie	Newton	Lady Hilda	W. J. Prather	Fresno.
	CLASS V—CARRIAGE TEAMS.				
Sorrel	Garland and sister	Buccaneer, Jr.		Col. Jas. McNasser	Sacramento.
Steel gray				E. M. Leitch	Sacramento.
	CLASS VI—ROADSTER TEAMS.				
Bay	Frank			F. K. Burgess	Sacramento.
Bay	Dolly			F. K. Burgess	Sacramento.
Sorrel	Lail			J. E. Gault	Sacramento.
Sorrel	Nell			J. E. Gault	Sacramento.
Cream	Cavaleta			J. R. Parker	Alturas.
Black	Charley			J. R. Parker	Alturas.
Black	Lula			Joe Stephens	Dixon.
Black	Lola			Joe Stephens	Dixon.
Bay	Addie B.	Echo	By Norfolk	A. L. Nichols	Sacramento.
Bay	Standard N.	Almor	By Nutwood	A. L. Nichols	Sacramento.
Bay	Kathleen	Singleton	Kate, by Volcan	F. H. Barnard	Chico.
Bay	Fashion	Singleton	Kate	F. H. Barnard	Chico.
Bay	Eva O.	Caligny	Constant, by Primus	J. N. Killip	San Francisco.
Chestnut	Tony B.	Whipple's Hambletonian	By John Nelson	J. N. Killip	San Francisco.
Chestnut	Nutwood	Nutwood		S. Tryon	Sacramento.
Bay	Woodnut	Nutwood		S. Tryon	Sacramento.
Bay	Adventure			B. E. Harris	San Francisco.
	Jolly Boy			B. E. Harris	San Francisco.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
CLASS VII—HORSES OF ALL WORK.					
<i>Stallions—Four years old and over.</i>					
Bay	Davy Crockett.	Comet	Polly	W. Ober	Sacramento.
Silver gray	Noel	Decharis	By McClellan	Geo. Collins	Fresno.
Bay	Latham Almont.	Tifton Almont	Nancy	J. Detar	Colusa.
Chestnut	Charley Patchen.	Geo. M. Patchen, Jr.	Daisy	C. Kincaid	Davisville.
Black	John Vernon	Mt. Vernon	Patchen mare	J. A. McCloud	Stockton.
Sorrel	Phoenix	Prompter	Nellie	Jos. Rottier	Rottiers.
Gray	Vandee, Jr.	Vandee	By Black Hawk	R. J. Merkle	Sacramento.
Bay	Ajax	Davy Crockett	Eureka	C. F. Bunch	Ione.
Chestnut	Western	Prompter		A. D. Miller	Walsh Station.
<i>Stallions—Three years old.</i>					
Sorrel	Seebv	Dave Hill, Jr.	By Chieftain	Jos. Heintz	Sacramento.
	Hugo	Leland Stanford	Nellie Rattler	B. E. Harris	San Francisco.
<i>Stallions—Two years old.</i>					
Bay	Gen. Sherman	Transit	By Bellfounder	Geo. Lassner	Freeport.
Sorrel	Selim	Dave Hill, Jr.	By Chieftain	Jos. Heintz	Sacramento.
Chestnut	Tom Shields	Alcantara, Jr.	Queen	I. B. Ramsey	Meridian.
Sorrel	W L	Frank Rhoads	Nellie A	J. H. Allen	Sacramento.
Black	Alex Vernon	Mt. Vernon	By son of Henry Clay	J. A. McCloud	Stockton.
<i>Stallions—One year old.</i>					
Gray	Prince	Illiers	Fannie	W. J. Prather	Fresno.
Black	Chief	Fred Low	Black Bess	Geo. Lassner	Freeport.
Brown	Sir Walter	Utile	Nellie	Voorhies & Barney	Sutter Creek.
Chestnut	Stockton Vernon	Mt. Vernon	By Chieftain, Jr.	J. A. McCloud	Stockton.
Sorrel	Hamilton	Hambletonian horse		B. M. Lovejoy	Perkins.
<i>Stallions—Under one year.</i>					
Sorrel	Donald Card	Major	Sally	Geo. Lassner	Freeport.
Gray	Colonel	Buccaneer, Jr.	Flora	B. M. Lovejoy	Perkins.
<i>Mares—Four years old and over, with suckling colt.</i>					
Brown	Sally and colt Donald Card	Peacock	By St. Clair	George Lassner	Freeport.
Gray	Colley and colt	Patchen	Jennie Gray	George Lassner	Freeport.
Black	White Stockings and colt	Black Hawk	Messenger mare	B. M. Lovejoy	Perkins.
		Ethan Allen, Jr.		A. D. Miller	Walsh Station.
<i>Mares—Four years old and over.</i>					
Black	Annie Laurie	Prompter	Pet	H. H. Wilson	Rocklin.
Brown	Hannah	Black Ralph	Lucy Gray	H. Casey	Sacramento.
Bay	Luella	Miller's Hambletonian	By John Nelson	A. D. Miller	Walsh Station.
Bay	Daisy	Peacock (imp.)		Wm. McIntosh	Roseville.
<i>Mares—Three years old.</i>					
Brown	Jennie	Tag	Susie Muntford	George Lassner	Freeport.
Brown	Belle	Earl of Derby	Dollie	R. G. McKenzie	Nicolaus.
Gray	Nell	Pat (Norman)	Fannie	H. H. Wilson	Rocklin.
Bay	Nettie	Miller's Hambletonian	Lucy Gray	A. D. Miller	Walsh Station.
<i>Mares—Two years old.</i>					
Black	Dollie	Earl of Derby	Bolly	R. G. McKenzie	Nicolaus.
Bay	Lucy	Earl of Derby	Belle	C. B. Harris	Nicolaus.
Bay	Alice Vernon	Mt. Vernon	By Chieftain, Jr.	J. A. McCloud	Stockton.
<i>Mares—One year old.</i>					
Sorrel	Orphan Girl	Fred Low	Mollie	George Lassner	Freeport.
Brown	Elfa B	Fred Low	Susie Muntford	George Lassner	Freeport.
Bay	Kitten	Buccaneer, Jr.	Puss	A. D. Miller	Walsh Station.
<i>Mares—Suckling colts.</i>					
Sorrel	Bessie	Utile	Birdie	Voorhies & Barney	Sutter Creek.
Bay	Flora	Purdy's Hambletonian	Colley	H. H. Wilson	Rocklin.
CLASS VIII—DRAFT HORSES—NORMANS.					
<i>Stallions—Four years old and over.</i>					
Gray	Illiers (2275)			W. J. Prather	Fresno.
Black	Des Champs (imp.)			W. Wright	Davisville.
Gray	Beaufort (imp.)			J. P. Rodchaver	Petaluma.
CLASS IX—DRAFT HORSES—PERCHERONS.					
<i>Stallions—Four years old and over.</i>					
Black	Cinq Mars (2002)	Caures	Chapelle	Geo. McElroy	Arbuckle.
Bay	Utile (imp.)			Voorhies & Barney	Sutter Creek.
	General (481)	Bayard	Brebis	Wm. McIntosh	Roseville.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
Gray	<i>Stallions—Three years old.</i>				
Black	Oregon (11705)			J. C. Smith	Oakland.
	Origoso (19867)			J. C. Smith	Oakland.
Gray	<i>Stallions—Two years old.</i>				
	Magnet (21058)			J. C. Smith	Oakland.
Gray	<i>Stallions—One year old.</i>				
	Harrison	Utile	Patrie	Voorhies & Barney	Sutter Creek.
Gray	<i>Stallions—Under one year.</i>				
	Prince A	Utile	Patrie	Voorhies & Barney	Sutter Creek.
Gray	<i>Mares—Four years old and over, with suckling colt.</i>				
	Perinette (imp.) and colt			Voorhies & Barney	Sutter Creek.
Gray	<i>Mares—Four years old and over.</i>				
	Theresa (17855)			J. C. Smith	Oakland.
Gray	Laura (8880)			J. C. Smith	Oakland.
Gray	Perinette (imp.)			Voorhies & Barney	Sutter Creek.
Gray	Patrie			Voorhies & Barney	Sutter Creek.
Black	<i>Mares—One year old.</i>				
	Maunder (21059)			J. C. Smith	Oakland.
Gray	<i>Mares—Suckling colt.</i>				
	Princess A	Utile	Perinette	Voorhies & Barney	Sutter Creek.
Black	<i>CLASS XI—DRAFT HORSES—CLYDESDALES.</i>				
Bay	<i>Stallions—Four years old and over.</i>				
	Black Champion	Pride of Clyde	Polly	C. W. Bennett	Wheatland.
	Prince	Ben Lomond (imp.)	By Glancer (imp.)	John Coakley	Irvington.
Bay	<i>Stallions—Three years old.</i>				
	Douglas Dale (7650)	Douglas Chief (2608)	Jennie of Bogside	Stoddard & De Gomez	Auburn.
Brown	<i>Stallions—Under one year.</i>				
Bay	Annadale	Black Champion	By Glancer (imp.)	C. W. Bennett	Wheatland.
	Clyde Boy	Model Prince		T. A. Nufer	Concord.
Bay	<i>Mares—Four years old and over, with suckling colt.</i>				
	Jule and colt.	Model Prince	By Glancer (imp.)	T. A. Nufer	Concord.
Bay	<i>Mares—Four years old and over.</i>				
	Queen	Ben Lomond (imp.)	By Glancer (imp.)	Henry Pierce	San Francisco.
Bay	Blanche	Ben Lomond (imp.)	By Glancer (imp.)	Henry Pierce	San Francisco.
Bay	<i>Mares—Under one year.</i>				
	Aldine	Black Champion		C. W. Bennett	Wheatland.
Bay	Adelaide	Black Champion		C. W. Bennett	Wheatland.
Chestnut	<i>CLASS XI—DRAFT HORSES OTHER THAN NORMAN, PERCHERON, OR CLYDESDALE.</i>				
Gray	<i>Stallions—Four years old and over.</i>				
Brown	Glory 2d	Normandy	By imp. Wm. Wallace	C. S. Studarus	Routiers.
Bay	Emperor	Lord Derby	Magie	T. Ross	Sacramento.
Bay	Earl of Derby	Cambridge	By Warrior	R. G. McKenzie	Nicolaus.
Black	Exchange	Dumas	Fanchon	T. A. Nufer	Concord.
Bay	Victor	Imp. Peacock	Imp. Normandy	R. J. Merkle	Sacramento.
Bay	Franklin			H. Ehrhardt	Franklin.
Gray	<i>Stallions—Three years old.</i>				
	Barney	Dumas	Nellie	R. J. Merkle	Sacramento.
Brown	<i>Stallions—Two years old.</i>				
	Lothair 4th.	Lothair	Lady B	Parsons & Griffith	Geyserville.
Bay	<i>Stallions—One year old.</i>				
	California Tom	Honest Tom	Lady B	Parsons & Griffith	Geyserville.
Brown	<i>Stallions—Under one year.</i>				
	Blainey	Illiers		W. J. Prather	Fresno.
Bay	<i>Mares—Four years old and over, with suckling colt.</i>				
	Lady B and colt	Wellington		Parsons & Griffith	Geyserville.
Gray	Lady Lomond and colt.	Ben Lomond	Lady Dock	Parsons & Griffith	Geyserville.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
	<i>Mares—Four years old and over.</i>				
Gray	Topsy	French Monarch	Mettie	F. W. Midgley	Carbondale.
Gray	Mettie	French Monarch	Mollie	F. W. Midgley	Carbondale.
Brown.	Langtry	Blacklegs	Nellie	Parsons & Griffith	Geyersville.
Black	Fanchon	Normandy		R. J. Merkley	Sacramento.
	<i>Mares—Three years old.</i>				
Gray	Perch	French Lion	Mollie	F. W. Midgley	Carbondale.
Brown	Mollie	Earl of Derby		R. G. McKenzie	Nicolaus.
Sorrel	Curlw	Dumas	Fanchon	J. E. McDonald	Carson City.
Black	Black Bess			R. J. Merkley	Sacramento.
	<i>Mares—Two years old.</i>				
Bay	Estred	Earl of Derby	Maggie	C. B. Harris	Nicolaus.
Bay	Queen	Salvator	Fanchon	R. J. Merkley	Sacramento.
Black	Belle	St. Lawrence, Jr.	Juanita		
	<i>Mares—One year old.</i>				
Gray	Mollie	Idor	Mettie	F. W. Midgley	Carbondale.
Black	Mollie	Salvator	Fanchon	R. J. Merkley	Sacramento.
Sorrel	Curline	Prince Jack	Curlw	J. E. McDonald	Carson City.
	<i>WALKING MATCH.</i>				
Gray	Illiers (2275)			W. J. Prather	Fresno.
	General (48)			Wm. McIntosh	Roseville.
	<i>CLASS XII—SADDLE HORSES.</i>				
White	Winters' Boy	Son of Norfolk		C. I. Lowell	Sacramento.
Bay	Veda	Haggin's Bismarck		Dr. G. M. Dixon	Sacramento.
Roan	J. D.	Tilton Almont		J. M. Dixon	Dixon.
Bay	Lottie	Duster		J. M. Dixon	Dixon.
Sorrel	E. A.			E. A. Bridgeford	Colusa.
	Dixon			B. E. Harris	San Francisco.
	<i>CLASS XIII—SWEETSTAKES.</i>				
	<i>Stallions.</i>				
Bay	Kebir	Alcazar	By Santa Claus	W. F. Smith	Sacramento.
Bay	Nut Grove	Grosvenor	Lady Nutwood	E. Topham	Milpitas.
Bay	Douglas	Redwood	Lena Bowles	B. E. Harris	San Francisco.
	<i>Mares.</i>				
Chestnut	Annie Laurie	Hubbard	Mayflower	W. F. Smith	Sacramento.
Bay	Isabella	Norfolk	Maggie S	C. Halverson	Routiers.
Bay	Lady Nutwood	Nutwood	Lady Mc	E. Topham	Milpitas.
Bay	Sidena	Sidney	Lena Bowles	B. E. Harris	San Francisco.
	<i>CLASS XIV—JACKS, JENNIES, ETC.</i>				
	<i>Jacks—Four years old and over.</i>				
Black	Alfonso	Black Hawk	Madame Friday	H. W. Jeans	Blocksburg.
Black	Fonso	Jack Peacock	By Black Warrior	H. W. Jeans	Blocksburg.
Black	Black Jeff			Charles Studarus	Routiers.
Black	Longfellow			J. D. Rosenberger	Sites.
Black	Bob Ingersoll			J. D. Rosenberger	Sites.
Black	Beecher			J. D. Rosenberger	Sites.
Black	Brigham Young			J. D. Rosenberger	Sites.
	<i>Jacks—Three years old.</i>				
	Longfellow	Royal Duke	By Excelsior	E. S. Driver	Antelope.
	<i>Jacks—One year old.</i>				
Black	Moses, Blow Your Horn			T. H. Harlan	Williams.
	Gable			A. H. Harlan	Venado.
	<i>Jennies—Four years old and over.</i>				
Black	Laura			C. Studarus	Routiers.
	<i>Jennies—One year old.</i>				
Black	Belle			C. Studarus	Routiers.
	<i>Mules—Matched span, three years old and over.</i>				
Brown.	Sally and Beck			H. W. Jeans	Blocksburg.
	Pet and Nell			George Smith	Nicolaus.
	<i>Mules—One year old.</i>				
Brown.	Barney			C. Studarus	Routiers.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
	<i>Males—Under one year.</i>				
Red	Billy			C. Studarus.	Routiers.
				C. Studarus.	Routiers.
				J. D. Rosenberger.	Sites.

CATTLE.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
	<i>CLASS 1—DURHAMS.</i>				
	<i>Dairy Prize—Cows—Three years old and over.</i>				
Red	Viscountess 4th	Young Mary's Duke of Bath	Viscountess 3d	Heilbron Bros.	Sacramento.
Red	4th Belle of Antelope.	Stockton Duke	Belle of Antelope	E. Peterson	Sites.
Red	True B	Ronen's Duke of Airdrie	3d Allie B.	P. Peterson	Sites.
Red	Putti	Counselor	5th Belle of Antelope	P. Peterson	Sites.
Red	White Maid	Cherry Duke	Crown of Oaks	R. Ashburner	Baden.
Red	Baden Ruby	Baron of St. Lawrence	Fawsley Garland 26th	R. Ashburner	Baden.
	<i>Bulls—Three years old and over.</i>				
Red	2d Earl of Aberdeen (51413)	Earl of Aberdeen	Golden Queen	Heilbron Bros.	Sacramento.
Red	28th Grand Duke of Gloster (86804)	Imp. Double Gloster	Grand Rosette 2d	Heilbron Bros.	Sacramento.
Red	Counselor (73503)	Commissioner	Beauty 2d's Maid	P. Peterson	Sites.
Red	Red Eureka 3d (88872)	Sir Sidon	Red Dolly 9th	E. S. Driver	Antelope.
Red	Kirklevington Oxford Count (36723)	Kirklevington Duke	2d Wild Eyes Craggs	P. S. Childs	Davisville.
Red	26th Kirklevington of F. H. (83238)	5th Kirklevington of F. H.	10th Rose of Forest Home	C. Younger & Son.	San José.
	<i>Bulls—Two years old.</i>				
Red	36th Grand Duke of Gloster (92623)	Imp. Double Gloster	Sharon Blossom	Heilbron Bros.	Sacramento.
Red	Duke of Wild Flower	2d Earl of Aberdeen	Water Spray	Heilbron Bros.	Sacramento.
Red	Cavalier (90980)	Counselor	4th Belle of Antelope	James Jones	Pleasant Grove.
Red	Cupbearer 2d (Vol. 34)	Spartan Hero	Victoria 66th	P. S. Childs	Davisville.
Red	4th Kirklevington of F. H. (86967)	Duke of Kirklevington	18th Rose of Forest Home	C. Younger & Son	San José.
	<i>Bulls—One year old.</i>				
Red	Prince Chier	2d Duke of Glenwood	2d Miss Bates of Glenwood	Heilbron Bros.	Sacramento.
Red	Lord Bates	Earl of Sharon	2d Miss Bates of Sharon	Heilbron Bros.	Sacramento.
Red	Aylesby's Duke	Earl of Aylesby	Lady Oxford 3d	Heilbron Bros.	Sacramento.
Red	2d Grand Duke of Lavender	Baron Lavender	20th Grand Duchess of Gloster	Heilbron Bros.	Sacramento.
Red	2d Duke of Wild Flower	Baron Lavender	Mayflower	Heilbron Bros.	Sacramento.
Red	Manunga Duke	Mazurka Duke	Manunga 2d	Heilbron Bros.	Sites.
Red	Red Eureka 4th (100348)	Josephus	Red Dolly 9th	E. S. Driver	Antelope.
Red	Roan Eureka (94844)	Red Eureka 3d	Blanche 3d	E. S. Driver	Antelope.
Red	Scottish King	5th Kirklevington of F. H.	4th Belle of Forest Home	P. S. Childs	Davisville.
Red	Belle's Duke of Forest Home.			C. Younger & Son	San José.
	<i>Bulls—Calves.</i>				
Red	3d Duke of Wild Flower	28th Grand Duke of Gloster	Water Crystal	Heilbron Bros.	Sacramento.
Red	4th Lord of Aberdeen	2d Earl of Aberdeen	May Rose of Shelborn	Heilbron Bros.	Sacramento.
Red	California Chief 2d	Marvelous 2d	Rose of Brighton	P. H. Murphy	Brighton.
Red	White Tail	Marvelous 2d	Rosa Belle 8th	P. H. Murphy	Brighton.
Red	Monte Cristo	Counselor	Belle of Antelope	P. Peterson	Sites.
Red	Rose's Duke of Forest Home	5th Kirklevington of F. H.	21st Rose of Forest Home	C. Younger & Son	San José.
Red	58th Kirklevington of Forest Home	26th Kirklevington of F. H.	Jessie Maynard	C. Younger & Son	San José.
Red	Lord of the Valley	Baden Duke 24th	Red Princess	S. Tryon	Sacramento.
Red	Roan Prince	Baron Gwynne 4th	Fawsley Garland 31st	R. Ashburner	Baden.
Red	Fawsley Duke 20th	Baron Gwynne 4th	Fawsley Garland 32d	R. Ashburner	Baden.
Red	Fawsley Duke 21st			R. Ashburner	Baden.
	<i>Cows—Three years old and over.</i>				
Red	19th Grand Duchess of Gloster	Imp. Double Gloster	Lady Elgin 8th	Heilbron Bros.	Sacramento.
Red	Water Crystal	2d Earl of Aberdeen	Water Sparkle	Heilbron Bros.	Sacramento.
Red	Viscountess 4th	Young Mary's Duke of Bath	Viscountess 3d	Heilbron Bros.	Sacramento.
Red	Hazel Kirke	6th Red Thorndale	Mirandi 14th	P. H. Murphy	Brighton.
Red	Ellen Dale	6th Red Thorndale	Hazel Kirke	P. H. Murphy	Brighton.
Red	Rose of Brighton	Hermit Duke	Rosa Belle 2d	P. H. Murphy	Brighton.
Red	Rosa Belle 8th	7th Beaumont	5th Belle of Antelope	P. Peterson	Sites.
Red	Nettie P	Hancock	2d Belle of Antelope	P. Peterson	Sites.
Red	Rosaly K	Roan Duchess Oxford	Hattie James 4th	P. S. Childs	Davisville.
Red	Hattie	Roan Duchess Oxford	Burnetta 2d	P. S. Childs	Davisville.
Red	Burnetta 7th	Kirklevington Duke 2d	Flora 2d	P. S. Childs	Davisville.
Red	Flora 16th	Oxford Oneida	Neil's Louan Lady	P. S. Childs	Davisville.
Red	Neil's Louan Lady 1st	Forest King	14th Rose of Forest Home	C. Younger & Son	San José.
Red	21st Rose of Forest Home	2d Duke of Alameda	2d Rose of Forest Home	C. Younger & Son	San José.
Red	14th Rose of Forest Home	Duke of Kirklevington	Jessie Maynard	C. Younger & Son	San José.
Red	Jessie Maynard 4th			S. Tryon	Sacramento.
Red	Red Annie				

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
<i>Cows—Two years old.</i>					
Red	Waterspout.	2d Earl of Aberdeen	Water Sparkle	Heilbron Bros.	Sacramento.
Red	3d Rosaly K.	Counselor.	Rosaly K.	P. Peterson	Sites.
Red	8th Belle of Antelope	Counselor.	Belle of Antelope	P. Peterson	Sites.
Red	Oxford Rose 12th	5th Kirklevington of F. H.	Oxford Rose 6th	C. Younger & Son	San José.
Red	Bonnie Belle 6th.	3d Kirklevington of F. H.	Bonnie Belle 5th.	C. Younger & Son.	San José.
<i>Cows—One year old.</i>					
Red	Duchess of Wild Flower	Imp. Double Gloster.	5th Duchess of Phyllissis	Heilbron Bros.	Sacramento.
Red	Water Queen	Scottish Chief.	Water Crystal	Heilbron Bros.	Sacramento.
Red	Viscountess of Aylesby	Earl of Aylesby	Viscountess 4th	Heilbron Bros.	Sacramento.
Red	3d Duchess of Aberdeen	2d Earl of Aberdeen.	Mary Ann 2d	Heilbron Bros.	Sacramento.
Red	Lily Dale	Marvelous 2d	Ellen Dale	P. H. Murphy	Brighton.
Red	Good Templar	Knight Templar	Agatha	P. H. Murphy	Brighton.
Red	Miss Bartlett	Bartlett	Linda Belle	P. H. Murphy	Brighton.
Red	Rose of Brighton 2d	Marvelous 2d	Rose of Brighton	P. H. Murphy	Brighton.
Red	Lady Sites	Counselor	4th Belle of Antelope	P. Peterson	Sites.
Red	Tula	Syoc	True B.	P. Peterson	Sites.
Red	Jessie Maynard 5th	3d Kirklevington of F. H.	Jessie Maynard 4th	C. Younger & Son.	San José.
Red	Jessie Maynard 6th	3d Kirklevington of F. H.	Jessie Maynard 3d	C. Younger & Son	San José.
Red	Bonnie Belle 7th	3d Kirklevington of F. H.	Bonnie Belle 6th.	C. Younger & Son.	San José.
<i>Heifer Calves.</i>					
Red	5th Duchess of Aberdeen	2d Earl of Aberdeen	Mayflower 3d	Heilbron Bros.	Sacramento.
Red	Lady Alice	Marvelous 2d	Lynda Belle	P. H. Murphy	Brighton.
Red	Red Jennie	Marvelous 2d	Rose Jennie	P. H. Murphy	Brighton.
Red	Minnehaha	Counselor	Nettie P.	P. Peterson	Sites.
Red	Juanita	Counselor	2d Mountain Maid	P. Peterson	Sites.
Red	Red Dolly 35th	26th Kirklevington of F. H.	Red Dolly 27th	C. Younger & Son	San José.
Red	Gentle Annie	Grand Prince of Baden	S. Tryon	S. Tryon	Sacramento.
Red	Baden Ruby 5th		Baden Ruby	R. Ashburner	Baden.
<i>Herd—Over two years old.</i>					
Red	Bull: 28th Grand Duke of Gloster; cows: 18th Grand Duchess of Gloster, Viscountess 4th, Water Crystal, 5th Duchess of Phyllissis.			Heilbron Bros.	Sacramento.
<i>Herd—Under two years old.</i>					
Red	Bull: 26th Kirklevington of Forest Home; cows: 14th Rose of Forest Home, 21st Rose of Forest Home, Jessie Maynard 3d, Jessie Maynard 4th.			P. S. Childs.	Davisville.
Red	Bull: 2d Duke of Wild Flower; cows: Duchess of Wild Flower, Water Queen, Duchess of Aberdeen, 2d Duchess of Aberdeen			C. Younger & Son	San José.
Red	Bull: California Chief 2d; cows: Lily Dale, Good Templar, Rose of Brighton, Lady Alice.			Heilbron Bros.	Sacramento.
Red	Bull: Manunga Duke; cows: Ramona, Tula, Lady Sites, Lillian.			P. H. Murphy	Brighton.
Red	Bull: Belle's Duke of Forest Home; cows: Jessie Maynard 5th, Jessie Maynard 6th, Bonnie Belle 7th, Red Dolly 35th			P. Peterson	Sites.
<i>Sweepstakes—Bull of any age.</i>					
Red	28th Grand Duke of Gloster	Double Gloster (imp.)	Grand Rosette 2d	C. Younger & Son.	San José.
Red	Red Eureka 3d	Sir Sidon	Red Dolly 9th	Heilbron Bros.	Sacramento.
Red	Cupbearer 2d	Spartan Hero.	Victoria 66th	E. S. Driver	Antelope.
Red	26th Kirklevington of Forest Home	5th Kirklevington of F. H.	10th Rose of Forest Home.	P. S. Childs	Davisville.
<i>Sweepstakes—Cow of any age.</i>					
Red	19th Grand Duchess of Gloster	Double Gloster (imp.)	Lady Elgin 8th	C. Younger & Son.	San José.
Red	Nettie P.	Hancock	5th Belle of Antelope	Heilbron Bros.	Sacramento.
Red	Hattie	Roan Duchess of Oxford	Hattie Jones 4th	P. Peterson	Sites.
Red	21st Rose of Forest Home.	Forest King	14th Rose of Forest Home.	P. S. Childs	Davisville.
<i>CLASS II—JERSEYS AND GUERNSEYS.</i>					
<i>Bulls—Three years old and over.</i>					
Fawn	Queen's Ben Lomond (16432)	Fred Baker	Queen of Sacramento	A. L. Nichols	Sacramento.
Fawn	King of Y. B. (18302)	Arda's Perott	Queen of Y. B.	W. C. Smith	Florin.
Fawn	Lawgiver (14970)	Blythe's Othello	Mala of Forest Grove	P. Stanton	Sacramento.
Fawn	Duke of Alameda.	Glory of the Pacific.	Claremount Princess	S. A. Haxby	Alameda.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
Fawn	<i>Bulls—Two years old.</i> Alameda Chief.....	Oakland Chief	Oakland Bess	T. Ward	Oakland.
Fawn	<i>Bulls—One year old.</i> Commodore V.....	King of Y. B.	Martha of Florin	W. C. Smith	Florin.
Fawn	Bob Mercury (24202).....	Alphadron	Alpha Pearl	L. F. Eaton	Florin.
Fawn	Onondaga.....	Maud's Olaf	Flora Nix	T. Ward	Oakland.
Fawn	<i>Bulls—Calves.</i> Salvador.....	Ben Lomond	Dolly A.	A. L. Nichols	Sacramento.
Fawn	King of Florin.....	King of Y. B.	Irene of Strasburg	W. C. Smith	Florin.
Fawn	John L.....	King of Y. B.	Queen of Sacramento	W. C. Smith	Florin.
Fawn	Dude of Florin.....	King of Y. B.	Maud S	W. C. Smith	Florin.
Fawn	<i>Cows—Three years old and over.</i> Dolly A.....	Roderick Dhu	Twin's Daughter	A. L. Nichols	Sacramento.
Fawn	Irene of Strasburg.....	Hector of Plymouth Rock	Ida 3d	W. C. Smith	Florin.
Fawn	Queen of Sacramento.....	Fernando	Irene of Strasburg	W. C. Smith	Florin.
Fawn	Irene of Sacramento.....	Romeo of Sacramento	Irene of Strasburg	P. Stanton	Sacramento.
Fawn	Oleta.....	Fred Baker	Oleta	P. Stanton	Sacramento.
Fawn	Inez Baker.....	Lawgiver	Queen of Sacramento	P. Stanton	Sacramento.
Fawn	Manzanita Queen.....	Maud's Olaf	Mala of Forest Grove	T. Ward	Oakland.
Fawn	Mala of Forest Grove.....	Maud's Olaf	Pacific Mignon	T. Ward	Oakland.
Fawn	Bonita.....	Maud's Olaf		T. Ward	Oakland.
Fawn	Olifina.....				
Fawn	<i>Cows—Two years old.</i> Butte.....	Ben Lomond	Flora Nix	A. L. Nichols	Sacramento.
Fawn	Mono of Florin.....	Lawgiver	Irene of Strasburg	W. C. Smith	Florin.
Fawn	Princess of Lakeside.....	King of Y. B.	Martha of Florin	W. C. Smith	Florin.
Fawn	Lady Wells.....	Lawgiver	Flossie Wells	P. Stanton	Sacramento.
Fawn	Oakland Queen.....	Billy Ralston	Lady Maud	T. Ward	Oakland.
Fawn	<i>Cows—One year old.</i> Annie Simons.....	Kit Carson of Brighton	Irene Baker	W. A. Simons	Sacramento
Fawn	Belle Cora.....	Gladstone	Mira Baker	A. L. Nichols	Sacramento.
Fawn	Jewella.....	King of Y. B.	Flora Nix	A. L. Nichols	Sacramento.
Fawn	Buttercup.....	Kit Carson of Brighton	Queen of Sacramento	A. L. Nichols	Sacramento.
Fawn	Anita.....	King of Y. B.	Dido Baker	L. F. Eaton	Florin.
Fawn	<i>Heifer Calves.</i> Mernaide.....	Ben Lomond	Dina A	A. L. Nichols	Sacramento.
Fawn	Dolly B.....	Ben Lomond	Dolly A	A. L. Nichols	Sacramento.
Fawn	Lizzette.....	Ben Lomond	Gertrude	A. L. Nichols	Sacramento.
Fawn	Can't Tell.....	King of Y. B.	Mona of Florin	W. C. Smith	Florin.
Fawn	My Own.....	Lawgiver	Irene of Sacramento	P. Stanton	Sacramento.
Fawn	Frankie Baker.....	King of Y. B.	Florine Baker	L. F. Eaton	Florin.
Fawn	Lady Maud.....	Maud's Olaf	Bonita	T. Ward	Oakland.
Fawn	<i>Herds—Over two years old.</i> Bull: Lawgiver; cows: Oleta, Inez Baker, Lady Wells, and Steleen.....				
Fawn	Bull: Alameda Chief; cows: Mala of F. G., Bonita, Olifina, Oakland Queen.....				
Fawn	Bull: King of Y. B.; cows: Irene of Strasburg, Queen of Sacramento, Maud S, Mona.....				
Fawn	<i>Herds—Under two years old.</i> Bull: Salvador; cows: Belle Cora, Belle Dora, Mernaide, Jewella.....				
Fawn	Bull: Bob Mercury; cows: Frankie Baker, Lily Carson, Xariffa Baker, Flossie Baker.....				
Fawn	<i>Sweepstakes—Bull of any age.</i> Duke of Alameda.....	Glory of the Pacific	Claremount Princess	S. A. Haxby	Alameda.
Fawn	King of Y. B.....			W. C. Smith	Sacramento.
Fawn	<i>Sweepstakes—Cow of any age.</i> Irene of Strasburg.....			W. C. Smith	Florin.
Fawn	Mala of Forest Grove.....			T. Ward	Oakland.
Wh. & red	<i>CLASS III—DEVONS.</i> <i>Bulls—Three years old and over.</i> Laudin Duke.....	Ben	Julia	Boon Jones	Chico.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
Wh. & red.	<i>Bulls—Two years old.</i> Protection	By 3108	Dam 5127	R. McEnespy	Chico.
Wh. & red.	<i>Bulls—One year old.</i> Mayflower's Tom	Tom's Plowboy	Mayflower 5th	R. McEnespy	Chico.
Wh. & red.	<i>Cows—Three years old and over.</i> Mayflower 5th	Blucher	Mayflower 4th	R. McEnespy	Chico.
Wh. & red.	Frances	Luke		R. McEnespy	Chico.
Wh. & red.	<i>Cows—Two years old.</i> Nell	Salute	Nancy	R. McEnespy	Chico.
Wh. & red.	<i>Heifer Calves.</i> Rose of Butte	Protection	Nancy	R. McEnespy	Chico.
Wh. & red.	Edith	Protection	Mayflower	R. McEnespy	Chico.
Wh. & red.	Bull: Protection; cows: Mayflower, Frances, Rose of Butte, Edith			R. McEnespy	Chico.
Wh. & red.	<i>Sweepstakes—Bull of any age.</i> Protection			R. McEnespy	Chico.
Wh. & red.	<i>Sweepstakes—Cow of any age.</i> Mayflower			R. McEnespy	Chico.
Red	<i>CLASS IV—AYRESHIRE.</i> <i>Bulls—Three years old and over.</i> Red Mikado	Electioneer	Marian	G. Bement & Son	Maple Grove.
Red	<i>Bulls—One year old.</i> Faust	Red Mikado	Faxonia	G. Bement & Son	Maple Grove.
Red	<i>Bulls—Calves.</i> Frazier	Bruce	Faxonia	G. Bement & Son	Maple Grove.
Red	<i>Cows—Three years old and over.</i> Lady Faxon	Archie	Bonnie Jean	G. Bement & Son	Maple Grove.
Red	Marian	Archie	Miriam	G. Bement & Son	Maple Grove.
Red	Sybilla	Ethelbert	Sybilla	G. Bement & Son	Maple Grove.
Red	<i>Cows—Two years old.</i> Sabrina	Lord Faxon	Sybilla	G. Bement & Son	Maple Grove.
Red	<i>Cows—One year old.</i> Satilla	Red Mikado	Sybilla	G. Bement & Son	Maple Grove.
Red	<i>Heifer Calves.</i> Favonia	Lord Faxon	Lady Faxon	G. Bement & Son	Maple Grove.
Red	Manon	Lord Faxon	Marian	G. Bement & Son	Maple Grove.
Red	Songstress	Lord Faxon	Sybilla	G. Bement & Son	Maple Grove.
Red	<i>Herd—Over two years old.</i> Bull: Red Mikado; cows: Marian, Sybilla, Sabrina, Lady Faxon			G. Bement & Son	Maple Grove.
Red	<i>Herd—Under two years old.</i> Bull: Faust; cows: Satilla, Favonia, Manon, Songstress			G. Bement & Son	Maple Grove.
Red	<i>Sweepstakes—Bull of any age.</i> Red Mikado			G. Bement & Son	Maple Grove.
Red	<i>Sweepstakes—Cow of any age.</i> Sybilla			G. Bement & Son	Maple Grove.
Red & wh.	<i>CLASS V—HEREFORDS.</i> <i>Bulls—Three years old and over.</i> Sir Stanley	Winter De Cota	Dolly Varden 2d	Heilbron Bros.	Sacramento.
Red & wh.	Howard	Fair Boy	Pinkie 5th	Heilbron Bros.	Sacramento.
Red & wh.	<i>Bulls—One year old.</i> King William	Howard	Leda	Heilbron Bros.	Sacramento.
Red & wh.	Fresno	Prince	Eva S	Heilbron Bros.	Sacramento.
Red & wh.	Pirate	Eureka	Jessie M	Heilbron Bros.	Sacramento.
Red & wh.	Kit Carson	Howard	Kittie	Heilbron Bros.	Sacramento.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
Red & wh.	<i>Bulls—Calves.</i>				
Red & wh.	Noah	Howard	Grace	Heilbron Bros.	Sacramento.
Red & wh.	Sultan 2d	Howard	Alice 2d	Heilbron Bros.	Sacramento.
Red & wh.	<i>Cows—Three years old and over.</i>				
Red & wh.	Mabel	Centennial	Eva S	Heilbron Bros.	Sacramento.
Red & wh.	Jessie M	Captain	Jemima	Heilbron Bros.	Sacramento.
Red & wh.	<i>Cows—Two years old.</i>				
Red & wh.	Dainty	Centennial	Eva S	Heilbron Bros.	Sacramento.
Red & wh.	<i>Cows—One year old.</i>				
Red & wh.	Louise	Howard	Grace	Heilbron Bros.	Sacramento.
Red & wh.	Pearl	Howard	Actress	Heilbron Bros.	Sacramento.
Red & wh.	Lady Cora	Prince	Hinton	Heilbron Bros.	Sacramento.
Red & wh.	Lady Stanley	Sir Stanley	Mabel	Heilbron Bros.	Sacramento.
Red & wh.	Pigeon	Nutracker	Sir Stately	Geo. Bement	Maple Grove.
Red & wh.	<i>Heifer Calves.</i>				
Red & wh.	Lady Stanley	Sir Stanley	Hinton	Heilbron Bros.	Sacramento.
Red & wh.	Josie H	Howard	Jessie M	Heilbron Bros.	Sacramento.
Red & wh.	<i>Herd—Over two years old.</i>				
Red & wh.	Bull: Sir Stanley; cows: Mabel, Jessie M, Hinton, Eva S			Heilbron Bros.	Sacramento.
Red & wh.	<i>Herd—Under two years old.</i>				
Red & wh.	Bull: King William; cows: Lady Cora, Lorine, Pearl, Lady Stanley			Heilbron Bros.	Sacramento.
Red & wh.	<i>Sweepstakes—Bull of any age.</i>				
Red & wh.	Sir Stanley	Winter De Cota	Dolly Varden 2d	Heilbron Bros.	Sacramento.
Red & wh.	<i>Sweepstakes—Cow of any age.</i>				
Red & wh.	Mabel	Centennial	Eva S	Heilbron Bros.	Sacramento.
Red & wh.	Pigeon	Nutracker	Stately	Geo. Bement	Maple Grove.
Bl'k & wh.	<i>Bulls—Three years old and over.</i>				
Bl'k & wh.	Lady Fay's Artis	Prince of Artis	Lady Fay	Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	Egmond's Pride	Romley	Anna Egmond	G. B. Polhemus	Coyote.
Bl'k & wh.	Monsell	Aagie Adeline's 4th Rol'nd	Sopha Artis	T. B. Hall	Sacramento.
Bl'k & wh.	King of Menlo	Romley	Lena Wit's Menlo	F. H. Burke	Menlo Park.
Bl'k & wh.	<i>Bulls—Two years old.</i>				
Bl'k & wh.	King Aagie Clothilde	Clothilde (imp.)	Aagie Adeline 3d	G. B. Polhemus	Coyote.
Bl'k & wh.	Aagie Kathleen's Pride	Von Moltke	Aagie Kathleen	F. H. Burke	Menlo Park.
Bl'k & wh.	<i>Bulls—One year old.</i>				
Bl'k & wh.	Fanje 2d's Pride	Egmond's Pride	Fanje 2d	G. B. Polhemus	Coyote.
Bl'k & wh.	Linconia's Prince	Monsell	Linconia	T. B. Hall	Sacramento.
Bl'k & wh.	Friesian Duke	Monsell	Ontara Witch	T. B. Hall	Sacramento.
Bl'k & wh.	Virgie Rooker's Prince	Monsell	Virgie Rooker	T. B. Hall	Sacramento.
Bl'k & wh.	King's Own	Monsell	Kingsbury's Letty	T. B. Hall	Sacramento.
Bl'k & wh.	Laura Kingsbury's Prince	Monsell	Laura Kingsbury	T. B. Hall	Sacramento.
Bl'k & wh.	Troy Sedro	Sedro	Edna of Troy	F. H. Burke	Menlo Park.
Bl'k & wh.	<i>Bulls—Calves.</i>				
Bl'k & wh.	Artful of B. B.	Lady Fay's Artis	Mary Ann 2d	Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	Model of B. B.	Lady Fay's Artis	Anchilla 2d	Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	Mascotte of B. B.	Lady Fay's Artis	Endive	Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	Sam Rucker	Ansonia	Fanje	G. B. Polhemus	Coyote.
Bl'k & wh.	Swanette's Chief	Monsell	Swanette	T. B. Hall	Sacramento.
Bl'k & wh.	Duke Kingsbury	Monsell	Kingsbury's Nellie	T. B. Hall	Sacramento.
Bl'k & wh.	Virgie Rooker's Imperial	Monsell	Virgie Rooker	T. B. Hall	Sacramento.
Bl'k & wh.	Linconia's Chief	Monsell	Linconia	T. B. Hall	Sacramento.
Bl'k & wh.	Apollo Belvidere	Netherland	Calumet	F. H. Burke	Menlo Park.
Bl'k & wh.	<i>Cows—Three years old and over.</i>				
Bl'k & wh.	Anna Egmond	Osman (imp.)	Marie	G. B. Polhemus	Coyote.
Bl'k & wh.	Brakenhof	Kees' District Bull	Brakenhof	G. B. Polhemus	Coyote.
Bl'k & wh.	Ant. Poel	Wiernan's Kees	Johanna	T. B. Hall	Coyote.
Bl'k & wh.	Alexia of Lakeside	Imported	Imported	T. B. Hall	Sacramento.
Bl'k & wh.	Virgie Rooker	Imported	Imported	T. B. Hall	Sacramento.
Bl'k & wh.	Ontara Witch	Prince Imperial	Virgie Rooker	T. B. Hall	Sacramento.
Bl'k & wh.	Laura Kingsbury	Kingsbury	T. B. Hall	T. B. Hall	Sacramento.
Bl'k & wh.	Kyeless	Imported	Imported	F. H. Burke	Menlo Park.
Bl'k & wh.	Thessa	Imported	Imported	F. H. Burke	Menlo Park.
Bl'k & wh.	Sylpha	Imported	Imported	F. H. Burke	Menlo Park.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
<i>Cows—Two years old.</i>					
Bl'k & wh.	Josephine Lincoln	Romley	Tryntje Lincoln	Geo. B. Polhemus	Coyote.
Bl'k & wh.	Virgie Rooker 2d	Strathmore	Virgie Rooker	T. B. Hall	Sacramento.
Bl'k & wh.	Aaggie Lella 2d's Precious	Sedro	Aaggie Lella 2d	F. H. Burke	Menlo Park.
Bl'k & wh.	Bontje Lincoln 2d		Bontje Lincoln	F. H. Burke	Menlo Park.
<i>Cows—One year old.</i>					
Bl'k & wh.	Columbia of B. B.	Lady Fay's Artis	Peringa 2d	Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	Dominata of B. B.	Lady Fay's Artis	Domino	Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	Rebecca Egmond	Romley	Rebecca Egmond	Geo. B. Polhemus	Coyote.
Bl'k & wh.	Anna Egmond	Romley	Anna Egmond	Geo. B. Polhemus	Coyote.
Bl'k & wh.	Geert Van Diepen	Romley	Geert Van Diepen	Geo. B. Polhemus	Coyote.
Bl'k & wh.	Wiedman's Tinnette 3d	Egmond's Pride	Wiedman's Tinnette	T. B. Hall	Sacramento.
Bl'k & wh.	Alexia 2d	Monsell	Alexia of Lakeside	F. H. Burke	Menlo Park.
Bl'k & wh.	Bontje Lincoln 3d	Sedro	Bontje Lincoln	F. H. Burke	Menlo Park.
Bl'k & wh.	Florida	Netherland	Prince of Tevis' Laura	F. H. Burke	Menlo Park.
Bl'k & wh.	Lorita				
<i>Heifer Calves.</i>					
Bl'k & wh.	Bonita of B. B.	Lady Fay's Artis	Violet Myrrha	Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	Tryntje Lincoln 4th	Romley	Tryntje Lincoln	G. B. Polhemus	Coyote.
Bl'k & wh.	Ontara Witch 2d	Monsell	Ontara Witch	T. B. Hall	Sacramento.
Bl'k & wh.	Virgie Rooker 2d's Aaggie	El Kobalar	Virgie Rooker 2d	T. B. Hall	Sacramento.
Bl'k & wh.	Laura Kingsbury 2d	Sedro Thistle	Laura Kingsbury	T. B. Hall	Sacramento.
Bl'k & wh.	Peerless Maid	Sedro Thistle	Nadin Promoter's Peerless	T. B. Hall	Sacramento.
Bl'k & wh.	Dyne Koopman's Cortez	Cortez	Dyne Koopman	F. H. Burke	Menlo Park.
Bl'k & wh.			Bontje Lincoln	F. H. Burke	Menlo Park.
Bl'k & wh.			Jacob's Elizabeth	F. H. Burke	Menlo Park.
<i>Herd—Over two years old.</i>					
Bl'k & wh.	Bull: King Aaggie Clothilde; cows: Anna Egmond, Brakenhof, Ant. Poel, Fanje 2d			G. B. Polhemus	Coyote.
Bl'k & wh.	Bull: Monsell; cows: Alexia of Lakeside, Virgie Rooker, Ontara Witch, Laura Kingsbury			T. B. Hall	Sacramento.
<i>Herd—Under two years old.</i>					
Bl'k & wh.	Bull: Fanje 2d's Pride; cows: Geert Van Diepen 3d, Anna Egmond 3d, Rebecca Egmond 2d, Wiedman's Tinnette 3d			G. B. Polhemus	Coyote.
Bl'k & wh.	Bull: Friesian Duke; cows: Alexia of Lakeside 2d, Ontara Witch, Virgie Rooker 2d's Aaggie, Peerless Maid			T. B. Hall	Sacramento.
Bl'k & wh.	Bull: Troy Sedro; cows: Florinda, Lorita, Bontje Lincoln 3d, Sea Breeze			F. H. Burke	Menlo Park.
<i>Sweepstakes—Bull of any age.</i>					
Bl'k & wh.	Lady Fay's Artis			Bonnie Brae C. Co.	Hollister.
Bl'k & wh.	King Aaggie Clothilde			G. B. Polhemus	Coyote.
Bl'k & wh.	Friesian Duke			T. B. Hall	Sacramento.
Bl'k & wh.	King of Menlo			F. H. Burke	Menlo Park.
Bl'k & wh.	Monsell			T. B. Hall	Sacramento.
<i>Sweepstakes—Cow of any age.</i>					
Bl'k & wh.	Anna Egmond			G. B. Polhemus	Coyote.
Bl'k & wh.	Geert Van Diepen			G. B. Polhemus	Coyote.
Bl'k & wh.	Kyeless			F. H. Burke	Menlo Park.
<i>CLASS VII—ANGUS OR GALLOWSAYS.</i>					
<i>Bulls—Three years old and over.</i>					
Black	Wanda	Caludam	Beauty 2d of Moor Park	W. B. Gibson	Woodland.
Black	Kier's Knight	Valerius	Bonnie Blue Kier	J. E. Camp	Perkins.
Black	Logan	Basuto	Lizzie 3d of B.	Dr. G. M. Dixon	Sacramento.
<i>Bulls—Two years old.</i>					
Black	Brilliant	King William	Lady Guynd	Dr. G. M. Dixon	Sacramento.
<i>Bulls—One year old.</i>					
Black	Wanda 4th	Wanda	Lutie M. Funk	W. B. Gibson	Woodland.
Black	Egbert Laird	Orlando	Darling of Flora 2d	J. E. Camp	Perkins.
Black	Edgar A. Poe	Orlando	Lark of East View	J. E. Camp	Perkins.
Black	Duke of Brighton	Orlando	Darling of Flora	J. E. Camp	Perkins.
<i>Bulls—Calves.</i>					
Black	Wanda 5th	Wanda	Thanksgiving	W. B. Gibson	Woodland.
Black	Gretchen's Boy	Kier's Knight	Gretchen	J. E. Camp	Perkins.
Black	Nero of Argonaut	Minataur	Eva	Dr. G. M. Dixon	Sacramento.
Black	Pacto	Minataur	Thoroughbred Angus cow	Dr. G. M. Dixon	Sacramento.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
<i>Cows—Three years old and over.</i>					
Black	Annie Vince	Uncle Joe	Nellie of Tarbroech	W. B. Gibson	Woodland.
Black	Thanksgiving	Uncle Joe	Nellie of Tarbroech	W. B. Gibson	Woodland.
Black	Lutie M. Funk	Garfield of Tarbroech	Nellie of Tarbroech	W. B. Gibson	Woodland.
Black	Nevada	Wanda	Annie Vince	W. B. Gibson	Woodland.
Black	Lady Guynd	Falconer	Rose of Guynd	J. E. Camp	Perkins.
Black	Gretchen	Bl'k Prince of Ardhuncart	Annie of Ardhuncart	J. E. Camp	Perkins.
Black	Coquette 2d of L. F.	Basuto	Coquette 4th	Dr. G. M. Dixon	Sacramento.
Black	Eva	King William	Rose of Guynd	Dr. G. M. Dixon	Sacramento.
Black	Darling of Flora	Bannockburn	Darling of Burrilales	J. E. Camp	Perkins.
Black	Lark of East View			J. E. Camp	Perkins.
<i>Cows—Two years old.</i>					
Black	Lady Whitmore	Gildroy	Pride of Richland	Dr. G. M. Dixon	Sacramento.
Black	Lady Milne	Gildroy	Anna of Kennoctry	Dr. G. M. Dixon	Sacramento.
<i>Cows—One year old.</i>					
Black	Ethel Wynd	Orlando	Gretchen 2d	J. E. Camp	Perkins.
Black	Gretchen Lass	Orlando	Gretchen	J. E. Camp	Perkins.
Black	Dorcas of Argonaut	Eros	Titania 4th	Dr. G. M. Dixon	Sacramento.
<i>Heifer Calves.</i>					
Black	Annie Vince 2d	Wanda	Annie Vince	W. B. Gibson	Woodland.
Black	Lady of Brighton	Kier's Knight	Gretchen	J. E. Camp	Perkins.
Black	Coquette of Argonaut	Minataur	Coquette of L. F.	Dr. G. M. Dixon	Sacramento.
<i>Herds—Of any age.</i>					
	Bull: Wanda; cows: Thanksgiving, Lutie M. Funk, Annie Vince, Nevada.				
	Bull: Kier's Knight; cows: Lady Guynd, Gretchen, Lark of East View, Darling of Flora.				
	Bull: Brilliant; cows: Coquette 2d of L. F., Lady Whitmore, Lady Milne, Dorcas of Argonaut.				
<i>Sweepstakes—Bulls.</i>					
	Egbert Laird	Orlando	Beauvoir 2d of Moor Park	W. B. Gibson	Woodland.
	Brilliant	King William	Darling of Flora 2d	J. E. Camp	Perkins.
	Logan	Basuto	Lady Guynd	Dr. G. M. Dixon	Sacramento.
			Lizzie 3d of B.	Dr. G. M. Dixon	Sacramento.
<i>CLASS IX—GRADED CATTLE.</i>					
<i>Cows—Three years old and over.</i>					
	Mollie			C. I. Lowell	Sacramento.
	Mary			A. Menke	Brighton.
	Black Jess			Dr. G. M. Dixon	Sacramento.
	Peach Blossom			C. Younger & Son	San José.
	Jersey			S. Tryon	Sacramento.
	Gilli Flower			R. Ashburner	Baden.
	Yolo			T. Ward	Oakland.
<i>Cows—Two years old.</i>					
	Pauline			C. Younger & Son	San José.
	Speck			S. Tryon	Sacramento.
	Spring Rose			R. Ashburner	Baden.
<i>Cows—One year old.</i>					
	Fawn			S. Tryon	Sacramento.
<i>Heifer Calves.</i>					
				A. Menke	Brighton.
				A. Menke	Brighton.
				A. Menke	Brighton.
				S. Tryon	Sacramento.
				R. Ashburner	Baden.
				T. Ward	Oakland.
<i>CLASS X—HEED SWEEPSTAKES.</i>					
<i>Beef Breeds.</i>					
Durham	Bull: Counselor; cows: Nettie P, 2d Rosaly K, 3d Rosaly K, Lady Sites.			P. Peterson	Sites.
Durham	Bull: 28th Grand Duke of Gloster; cows: Viscountess 4th, 19th Grand Duchess of Gloster, Waterspout, Duchess of Wild Flower			Heilbron Bros.	Sacramento.
Durham	Bull: 28th Kirklevington of F. H.; cows: 21st Rose of F. H., Oxford Rose 11th, Oxford Rose 12th, Jessie Maynard 5th.			C. Younger & Son	San José.

FIRST DEPARTMENT—Continued.

Color.	Name.	Sire.	Dam.	Owner.	Residence.
Angus	Bull: Kier's Knight; cows: Lady Guynd, Darling of Flora, Gretchen 2d, Ethel Wynd.			J. E. Camp	Perkins.
	<i>Milk Breeds.</i>				
Holstein	Bull: King Aaggie Clothilde; cows: Anna Egmond, Betje Egmond 3d, Josephine Lincoln 3d, Rebecca Egmond 2d			G. B. Polhemus	Coyote.
Holstein	Bull: Monsell; cows: Alexia of Lakeside, Laura Kingsbury, Virge Rooker 2d, Alexia of Lakeside 2d			T. B. Hall	Sacramento.
Holstein	Bull: King of Menlo; cows: Kyleless, Ontarette, Aaggie Kathleen 2d's Precious, Florida			F. H. Burke	Menlo Park.

FIRST DEPARTMENT—Continued.

SHEEP.

NAME.	Owner.	Residence.
CLASS I—SPANISH MERINOS.		
Ram—Two years old and over.		
Stoneman	F. Bullard	Woodland.
Ram—One year old and under two.		
Yolo Chief	F. Bullard	Woodland.
Three Ram Lambs.		
One pen	F. Bullard	Woodland.
Pen of not less than five Ewes—Two years old and over.		
One pen	F. Bullard	Woodland.
Pen of not less than five Ewes—One year old and under two.		
One pen	F. Bullard	Woodland.
Ram and five of his Lambs.		
One pen	F. Bullard	Woodland.
Pen of not less than five Ewe Lambs.		
One pen	F. Bullard	Woodland.
CLASS II—FRENCH MERINOS.		
Ram—Two years old and over.		
Gas. Roberts	J. H. Glide	Sacramento.
Ram—One year old and under two.		
No. 1	J. H. Glide	Sacramento.
Three Ram Lambs.		
One pen	J. H. Glide	Sacramento.
Pen of not less than five Ewes—Two years old and over.		
One pen	J. H. Glide	Sacramento.
Pen of not less than five Ewes—One year old and under two.		
One pen	J. H. Glide	Sacramento.
Pen of not less than five Ewe Lambs.		
One pen	J. H. Glide	Sacramento.
Ram and five of his Lambs.		
Gas. Roberts and five of his lambs	J. H. Glide	Sacramento.
CLASS V—SHROPSHIRE.		
Ram of any age.		
Royal Duke of California 2d	A. Smith	Redwood City.
Redwood Prince 1st	A. Smith	Redwood City.
Humbo	J. H. Glide	Sacramento.
John Dryden	J. H. Glide	Sacramento.
Pen of Ewes, not less than five of any age.		
Jennie 3d, Bettie, Redwood Lass 1st, Redwood Lass 2d, Redwood Lass 8th, Redwood Lass 9th	A. Smith	Redwood City.
One pen of five ewes	J. H. Glide	Sacramento.
Ram and five of his Lambs.		
Royal Duke and five of his lambs	A. Smith	Redwood City.
Humbo and five of his lambs	J. H. Glide	Sacramento.

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
<i>Three Ram Lambs.</i>		
Redwood Prince 2d, 3d, and 4th.....	A. Smith.....	Redwood City.....
One pen.....	J. H. Glide.....	Sacramento.....
<i>Pen of not less than five Ewe Lambs.</i>		
Redwood Lass 10th, 11th, 12th, 13th, 14th.....	A. Smith.....	Redwood City.....
One pen.....	J. H. Glide.....	Sacramento.....
SWEEPSTAKES.		
<i>Merino Ram and five of his Lambs.</i>		
James Roberts and five of his lambs.....	J. H. Glide.....	Sacramento.....
Stoneman and five of his lambs.....	F. Bullard.....	Woodland.....
<i>Shropshire Ram and five of his Lambs.</i>		
Royal Duke of California 2d and five of his lambs.....	A. Smith.....	Redwood City.....
Jumbo and five of his lambs.....	J. H. Glide.....	Sacramento.....
<i>Shropshire Association Premium.</i>		
Two ram lambs.....	A. Smith.....	Redwood City.....
Two ewe lambs.....	A. Smith.....	Redwood City.....
Two ewes.....	A. Smith.....	Redwood City.....
Three ewe lambs and two ram lambs.....	A. Smith.....	Redwood City.....

ANGORA GOATS.

NAME.	Owner.	Residence.
<i>Buck—Two years old and over.</i>		
Soledad.....	C. P. Bailey.....	San Jose.....
Nevada.....	C. P. Bailey.....	San Jose.....
Governor Helm, Jr.	T. H. Harlan.....	Willits.....
Gilmore.....	H. H. Harlan.....	Veneta.....
<i>Buck—Under two years.</i>		
Mariposa.....	C. P. Bailey.....	San Jose.....
Oasis.....	C. P. Bailey.....	San Jose.....
Shirland.....	T. H. Harlan.....	Willits.....
<i>Pen of not less than three Does—Two years old and over.</i>		
One pen.....	C. P. Bailey.....	San Jose.....
One pen.....	T. H. Harlan.....	Willits.....
One pen.....	H. H. Harlan.....	Veneta.....
<i>Pen of not less than three Does—Under two years.</i>		
One pen.....	C. P. Bailey.....	San Jose.....
One pen.....	T. H. Harlan.....	Willits.....
One pen.....	H. H. Harlan.....	Veneta.....
GRADED.		
<i>Pen of not less than three Does—Two years old and over.</i>		
One pen.....	T. H. Harlan.....	Willits.....
One pen.....	H. H. Harlan.....	Veneta.....
<i>Pen of not less than three Does—Under two years.</i>		
One pen.....	T. H. Harlan.....	Willits.....
One pen.....	H. H. Harlan.....	Veneta.....

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
HERD.		
<i>Of not less than ten of any age or breed.</i>		
One herd.....	C. P. Bailey.....	San José.....
One herd.....	T. H. Harlan.....	Williams.....
SWINE.		
NAME.	Owner.	Residence.
CLASS I—BERKSHIRE.		
<i>Boar—Two years old and over.</i>		
Model Duke.....	A. Smith.....	Redwood City.....
Redwood Prince.....	T. Waite.....	Perkins.....
<i>Boar—One year old and under two years.</i>		
Archie.....	A. Smith.....	Redwood City.....
Tom Ward.....	T. Waite.....	Perkins.....
<i>Boar—Six months old and under one year.</i>		
Redwood Model.....	A. Smith.....	Redwood City.....
Pacific Prince (imp.).....	T. Waite.....	Perkins.....
<i>Breeding Sow—Two years old and over.</i>		
Redwood Duchess.....	A. Smith.....	Redwood City.....
Redwood Belle.....	T. Waite.....	Perkins.....
<i>Sow—One year old and under two.</i>		
Victoria.....	A. Smith.....	Redwood City.....
Redwood Queen 2d.....	A. Smith.....	Redwood City.....
Duchess of Perkins 3d.....	T. Waite.....	Perkins.....
<i>Sow—Six months old and under one year.</i>		
Redwood Beauty.....	A. Smith.....	Redwood City.....
Redwood Ruby.....	A. Smith.....	Redwood City.....
Duchess of Perkins 4th.....	T. Waite.....	Perkins.....
<i>Sow and six Pigs—Under three months.</i>		
Esther and six pigs.....	A. Smith.....	Redwood City.....
Redwood Sallie and six pigs.....	A. Smith.....	Redwood City.....
<i>Pair of Pigs under six months.</i>		
Royal Duke and Perfection 3d.....	A. Smith.....	Redwood City.....
Model Prince and Model Lass.....	A. Smith.....	Redwood City.....
<i>Sweepstakes—Boar of any age.</i>		
Model Duke.....	A. Smith.....	Redwood City.....
Archie.....	A. Smith.....	Redwood City.....
Pacific Prince.....	T. Waite.....	Perkins.....
<i>Sweepstakes—Sow of any age.</i>		
Redwood Duchess.....	A. Smith.....	Redwood City.....
Redwood Beauty.....	A. Smith.....	Redwood City.....
Redwood Belle.....	T. Waite.....	Perkins.....
<i>Pen of six Pigs under six months.</i>		
One pen.....	A. Smith.....	Redwood City.....
<i>Family—One Boar, two Sows, and six Pigs.</i>		
One family.....	A. Smith.....	Redwood City.....
CLASS II—ESSEX.		
<i>Boar—Two years old and over.</i>		
Tyler.....	G. Bement & Son.....	Maple Grove.....

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
<i>Boar—Six months old and under one year.</i>		
Martin	G. Bement & Son	Maple Grove
<i>Breeding Sow—Two years old and over.</i>		
Duchess of Essex	G. Bement & Son	Maple Grove
<i>Sow—One year old and under two years.</i>		
California Duchess	G. Bement & Son	Maple Grove
<i>Sow—Six months old and under one year.</i>		
One sow	G. Bement & Son	Maple Grove
<i>Pair of Pigs.</i>		
One pair	G. Bement & Son	Maple Grove
<i>Sweepstakes—Boar of any age.</i>		
Martin	G. Bement & Son	Maple Grove
<i>Sweepstakes—Sow of any age.</i>		
California Duchess	G. Bement & Son	Maple Grove
CLASS III—POLAND-CHINA.		
<i>Boar—Two years old and over.</i>		
Perfection King	J. Melvin	Davisville
<i>Boar—One year old and under two.</i>		
San Carlos	A. Smith	Redwood City
King of the West	J. Melvin	Davisville
Hoosier Boy 2d	J. Melvin	Davisville
<i>Boar—Six months old and under one year.</i>		
Golddust	A. Smith	Redwood City
Alex. Choice	P. H. Murphy	Perkins
<i>Sow—Two years old and over.</i>		
Redwood Ruby	A. Smith	Redwood City
Anglea Golddust	J. Melvin	Davisville
<i>Sow—One year old and under two.</i>		
Michigan Girl	A. Smith	Redwood City
Anglea Golddust 4th	J. Melvin	Davisville
<i>Sow—Six months old and under one year.</i>		
Perfection	A. Smith	Redwood City
Richmond Belle	P. H. Murphy	Perkins
Beauty	J. Melvin	Davisville
<i>Sow and six Pigs—Under three months.</i>		
Juliet and six pigs	A. Smith	Redwood City
<i>Pair of Pigs—Under six months.</i>		
Sunlight and Beauty	A. Smith	Redwood City
Solomon and Jim	A. Smith	Redwood City
One pair	J. Melvin	Davisville
<i>Sweepstakes—Boar of any age.</i>		
San Carlos	A. Smith	Redwood City
King of the West	J. Melvin	Davisville
<i>Sweepstakes—Sow of any age.</i>		
Redwood Ruby	A. Smith	Redwood City
Anglea Golddust	J. Melvin	Davisville
<i>Pen of six Pigs—Under six months.</i>		
One pen	A. Smith	Redwood City
One pen	J. Melvin	Davisville

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
<i>Family—To consist of one Boar, two Sows, and six Pigs.</i>		
San Carlos, two sows, and six pigs	A. Smith	Redwood City
Perfection King, two sows, and six pigs	J. Melvin	Davisville
POULTRY.		
NAME.	Owner.	Residence.
LIGHT BRAHMAS.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	G. E. Duden	Sacramento
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
One cockerel and pullet	G. E. Duden	Sacramento
One cockerel and pullet	C. J. Cox	Sacramento
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins
One breeding pen	G. E. Duden	Sacramento
One breeding pen	C. J. Cox	Sacramento
DARK BRAHMAS.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	E. H. Freeman	Santa Clara
One cock and hen	E. H. Freeman	Santa Clara
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins
One breeding pen	E. H. Freeman	Santa Clara
LANGSHANS.		
<i>Cock and Hen.</i>		
One cock and hen	G. E. Duden	Sacramento
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	G. E. Duden	Sacramento
<i>Breeding Pen.</i>		
One breeding pen	G. E. Duden	Sacramento
BUFF COCHINS.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	G. E. Duden	Sacramento
One cock and hen	C. J. Cox	Sacramento
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
One cockerel and pullet	G. E. Duden	Sacramento
One cockerel and pullet	C. J. Cox	Sacramento
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins
One breeding pen	C. J. Cox	Sacramento

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
PARTRIDGE COCHINS.		
<i>Cock and Hen.</i>		
One cock and hen	G. E. Duden	Sacramento
One cock and hen	E. H. Freeman	Santa Clara
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	G. E. Duden	Sacramento
One cockerel and pullet	E. H. Freeman	Santa Clara
One cockerel and pullet	E. H. Freeman	Santa Clara
<i>Breeding Pen.</i>		
One breeding pen	G. E. Duden	Sacramento
One breeding pen	E. H. Freeman	Santa Clara
PLYMOUTH ROCKS.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	G. E. Duden	Sacramento
One cock and hen	L. F. Eaton	Flora
One cock and hen (barred)	E. H. Freeman	Santa Clara
One cock and hen (white)	E. H. Freeman	Santa Clara
One cock and hen (white)	E. H. Freeman	Santa Clara
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
One cockerel and pullet	G. E. Duden	Sacramento
One cockerel and pullet	L. F. Eaton	Flora
One cockerel and pullet	L. F. Eaton	Flora
One cockerel and pullet (barred)	E. H. Freeman	Santa Clara
One cockerel and pullet (white)	E. H. Freeman	Santa Clara
<i>Breeding Pen.</i>		
One breeding pen	G. E. Duden	Sacramento
One breeding pen (barred)	E. H. Freeman	Santa Clara
One breeding pen (white)	E. H. Freeman	Santa Clara
BLACK LEGHORNS.		
<i>Cock and Hen.</i>		
One cock and hen	E. H. Freeman	Santa Clara
One cock and hen	C. J. Cox	Sacramento
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	C. J. Cox	Sacramento
<i>Breeding Pen.</i>		
One breeding pen	C. J. Cox	Sacramento
BROWN LEGHORNS.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	G. E. Duden	Sacramento
One cock and hen	E. H. Freeman	Santa Clara
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
One cockerel and pullet	G. E. Duden	Sacramento
One cockerel and pullet	C. W. Eldred	Sacramento
One cockerel and pullet	C. J. Cox	Sacramento
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins
One breeding pen	G. E. Duden	Sacramento
One breeding pen	C. J. Cox	Sacramento

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
WHITE LEGHORNS.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	W. C. Smith	Flora
One cock and hen	G. E. Duden	Sacramento
One cock and hen	E. H. Freeman	Santa Clara
One cock and hen (rose combed)	E. H. Freeman	Santa Clara
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
One cockerel and pullet	G. E. Duden	Sacramento
One cockerel and pullet	C. J. Cox	Sacramento
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins
One breeding pen	W. C. Smith	Flora
One breeding pen	G. E. Duden	Sacramento
One breeding pen	E. H. Freeman	Santa Clara
WHITE-FACED BLACK SPANISH.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	G. E. Duden	Sacramento
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
One cockerel and pullet	G. E. Duden	Sacramento
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins
One breeding pen	G. E. Duden	Sacramento
HOUDANS.		
<i>Cock and Hen.</i>		
One cock and hen	E. H. Freeman	Santa Clara
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
SILVER-SPANGLED HAMBURGS.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
One cock and hen	C. J. Cox	Sacramento
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins
One breeding pen	C. J. Cox	Sacramento
POLISH.		
<i>Cock and Hen.</i>		
One cock and hen	T. Waite	Perkins
<i>Cockerel and Pullet.</i>		
One cockerel and pullet	T. Waite	Perkins
<i>Breeding Pen.</i>		
One breeding pen	T. Waite	Perkins

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
WYANDOTTES.		
<i>Cock and Hen.</i>		
One cock and hen.....	T. Waite.....	Per
One cock and hen.....	G. E. Duden.....	Sacram
One cock and hen (silver).....	E. H. Freeman.....	Santa C
One cock and hen (white).....	E. H. Freeman.....	Santa C
One cock and hen (golden).....	E. H. Freeman.....	Santa C
One cock and hen (silver).....	C. J. Cox.....	Sacram
<i>Cockerel and Pullet.</i>		
One cockerel and pullet.....	C. W. Eldred.....	Sacram
One cockerel and pullet.....	T. Waite.....	Per
One cockerel and pullet.....	G. E. Duden.....	Sacram
One cockerel and pullet.....	E. H. Freeman.....	Santa C
One cockerel and pullet.....	E. H. Freeman.....	Santa C
One cockerel and pullet.....	E. H. Freeman.....	Santa C
One cockerel and pullet.....	E. H. Freeman.....	Santa C
<i>Breeding Pen.</i>		
One breeding pen.....	C. W. Eldred.....	Sacram
One breeding pen.....	T. Waite.....	Per
One breeding pen.....	G. E. Duden.....	Sacram
One breeding pen (silver).....	C. J. Cox.....	Sacram
One breeding pen.....	S. H. Pugh.....	Per
One breeding pen (silver).....	E. H. Freeman.....	Santa C
One breeding pen (white).....	E. H. Freeman.....	Santa C
SEABRIGHT BANTAMS.		
<i>Cock and Hen.</i>		
One cock and hen (golden).....	E. H. Freeman.....	Santa C
<i>Breeding Pen.</i>		
One breeding pen (golden).....	E. H. Freeman.....	Santa C
BLACK-BREASTED RED GAME.		
<i>Cock and Hen.</i>		
One cock and hen.....	T. Waite.....	Per
One cock and hen.....	G. E. Duden.....	Sacram
One cock and hen.....	E. H. Freeman.....	Santa C
<i>Breeding Pen.</i>		
One breeding pen.....	T. Waite.....	Per
One breeding pen.....	G. E. Duden.....	Sacram
One breeding pen.....	E. H. Freeman.....	Santa C
BRONZE TURKEYS.		
One pair.....	T. Waite.....	Per
WILD TURKEYS.		
One pair.....	T. Waite.....	Per
TOULOUSE GEESE.		
One pair.....	T. Waite.....	Per
One pair.....	P. Stanton.....	Sacram
ROUEN DUCKS.		
One pair.....	T. Waite.....	Per
PEKIN DUCKS.		
One pair.....	T. Waite.....	Per
One pair.....	C. J. Cox.....	Sacram
Two pair.....	E. H. Freeman.....	Santa C

FIRST DEPARTMENT—Continued.

NAME.	Owner.	Residence.
GUINEA FOWLS.		
One pair.....	A. Smith.....	Redwood City.
One pair.....	A. Smith.....	Redwood City.
One pair.....	T. Waite.....	Perkins.
One pair.....	G. E. Duden.....	Sacramento.
One pair.....	G. E. Duden.....	Sacramento.
One pair.....	E. S. Driver.....	Antelope.
SPECIAL ENTRIES.		
One pair Golden Polands.....	C. W. Eldred.....	Sacramento.
One pair White Cochins.....	C. J. Cox.....	Sacramento.
One pair White Dorcans.....	C. J. Cox.....	Sacramento.
ENTRIES FOR THE GOLD MEDAL.		
EXHIBIT.	Owner.	Residence.
HORSES.		
Twelve head of horses.....	Wilbur F. Smith.....	Sacramento.
Seven head of horses.....	J. C. Smith.....	Oakland.
Seven head of horses.....	J. A. McCloud.....	Stockton.
Eight head of horses.....	R. J. Merkley.....	Sacramento.
Five head of horses.....	E. Topham.....	Milpitas.
Twelve head of horses.....	A. D. Miller.....	Walsh Station.
Seven head of horses.....	La Siesta Ranch.....	Menlo Park.
Eight head of horses.....	Voorhies & Barney.....	Sutter Creek.
Five head of horses.....	M. Salisbury.....	Pleasanton.
LIVE STOCK OTHER THAN HORSES.		
Twenty head of Durham cattle.....	P. Peterson.....	Sites.
Forty-four head of Durham and Hereford cattle.....	Heilbron Bros.....	Sacramento.
Twenty-seven head of Durham cattle.....	C. Younger & Son.....	San José.
Twenty head of Angora goats.....	T. H. Harlan.....	Williams.
Twenty-five head of Holstein cattle.....	F. H. Burke.....	Menlo Park.
Twenty-five head of Angus cattle.....	J. E. Camp.....	Perkins.

SECOND DEPARTMENT.

CLASS I—MACHINERY, ENGINES, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
O. Beatty.....	Sacramento.....	Apparatus for raising water for irrigation or mining purposes.
Lot, Neilsen & Co.....	Sacramento.....	Apparatus for raising water for irrigation or mining purposes.
Job Price.....	San Leandro.....	Traction engine.
San Spray Pump Co.....	Los Gatos.....	Bean spray pump for orchards.
San Spray Pump Co.....	Los Gatos.....	Well pump.
San Francisco Tool Co.....	San Francisco.....	Steam engine, 20 horse-power.
San Francisco Tool Co.....	San Francisco.....	Apparatus for raising water for irrigation or mining purposes.
Law, Ingram, Batchelor & Co.....	Sacramento.....	Saw gummer.
Pacific Manufacturing Co.....	San Francisco.....	Apparatus for raising water for irrigation or mining purposes.

SECOND DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Stanton, Thomson & Co.	Sacramento	Well pump
Stanton, Thomson & Co.	Sacramento	Portable hand machine for manufacturing field or garden
Daniel Best	San Leandro	Traction steam engine, 45 horse-power
Daniel Best	San Leandro	Traction steam engine, 25 horse-power
Daniel Best	San Leandro	Display of machinery from one
Baker & Hamilton	Sacramento	Spray pump for orchards
Crouch & Lyman	Sacramento	Fire extinguisher
Risdon Iron Works	San Francisco	Davidson pump for general
Risdon Iron Works	San Francisco	Display of machinery from one
Wm. Stephens	Sacramento	Electric traction engine
Benicia Agricultural W'ks.	Benicia	Traction steam engine
W. H. Murray	San Francisco	Saw gum
W. H. Murray	San Francisco	Scroll
W. H. Murray	San Francisco	Water wheel (California make)

CLASS II—AGRICULTURAL MACHINES.

EXHIBITOR.	Address.	Articles Exhibited.
W. A. Wood Machine Co.	San Francisco	Horse hay
Deere Implement Co.	San Francisco	Horse hay
Deere Implement Co.	San Francisco	Hay and straw
Huntington-Hopkins Co.	Sacramento	Lawn m
Huntington-Hopkins Co.	Sacramento	Gopher
Huntington-Hopkins Co.	Sacramento	Post-hole
Huntington-Hopkins Co.	Sacramento	Lawn spr
Schaw, Ingram, Batcher & Co.	Sacramento	Lawn m
Schaw, Ingram, Batcher & Co.	Sacramento	Gopher
Schaw, Ingram, Batcher & Co.	Sacramento	Post-hole
Schaw, Ingram, Batcher & Co.	Sacramento	Well
Schaw, Ingram, Batcher & Co.	Sacramento	Vegetable
Schaw, Ingram, Batcher & Co.	Sacramento	Lawn spr
Stanton, Thomson & Co.	Sacramento	Cider mill and
Stanton, Thomson & Co.	Sacramento	Horse hay
Stanton, Thomson & Co.	Sacramento	Hay and straw
Stanton, Thomson & Co.	Sacramento	Power corn
Stanton, Thomson & Co.	Sacramento	Post-hole
J. F. Hill	Sacramento	Hay
S. C. H. Agricultural W'ks.	Stockton	Display of agricultural machinery, California manufacture, from one
S. C. H. Agricultural W'ks.	Stockton	Miller hay
Baker & Hamilton	Sacramento	Thrashing machine
Baker & Hamilton	Sacramento	Cider mill and
Baker & Hamilton	Sacramento	Horse hay
Baker & Hamilton	Sacramento	Hay and straw
Baker & Hamilton	Sacramento	Power corn
Baker & Hamilton	Sacramento	Hand corn
Baker & Hamilton	Sacramento	Lawn m
Baker & Hamilton	Sacramento	Lawn m
Benicia Agricultural W'ks.	Benicia	Display of agricultural machinery, California make, from one
Benicia Agricultural W'ks.	Benicia	Sweep horse
James Linforth	San Francisco	Zimmerman's fruit

SECOND DEPARTMENT—Continued.

CLASS III—AGRICULTURAL MACHINES.

EXHIBITOR.	Address.	Articles Exhibited.
Isaac Sylvester	Colusa	Weed cutter.
Henry Whitpen	Sacramento	Comb'd cultivator, roller, and pulverizer.
Matteson & Williamson	Stockton	Harvest Queen harvester.
W. A. Wood Machine Co.	San Francisco	Self-raking reaping machine.
W. A. Wood Machine Co.	San Francisco	Mowing machine.
W. A. Wood Machine Co.	San Francisco	Self-binding harvester.
Deere Implement Co.	San Francisco	Grain broadcast sowing machine.
Deere Implement Co.	San Francisco	Mowing machine.
Deere Implement Co.	San Francisco	Corn planter, horse power.
Deere Implement Co.	San Francisco	Potato digger.
Deere Implement Co.	San Francisco	Harrows.
Deere Implement Co.	San Francisco	One-horse cultivator.
Deere Implement Co.	San Francisco	Cultivator.
Deere Implement Co.	San Francisco	Horse hoe.
Deere Implement Co.	San Francisco	Combined clod crusher, harrow, pulverizer, and leveler.
Deere Implement Co.	San Francisco	Combined header and thrasher.
Deere Implement Co.	San Francisco	Mowing machine.
Molt Bros.	Stockton	
Amos Whitely & Co.	San Francisco	
Schaw, Ingram, Batcher & Co.	Sacramento	Mowing machine.
Schaw, Ingram, Batcher & Co.	Sacramento	Harrow.
Schaw, Ingram, Batcher & Co.	Sacramento	Combined clod crusher, harrow, pulverizer, and leveler.
Houser, Haines & Knight.	Stockton	The Haines-Houser combined header, thrasher, and cleaner.
San José Agricultural W'ks.	San José	Orchard and vineyard cultivator.
Stanton, Thomson & Co.	Sacramento	Wheat drill.
Stanton, Thomson & Co.	Sacramento	Grain broadcast sowing machine.
Stanton, Thomson & Co.	Sacramento	Mowing machine.
Stanton, Thomson & Co.	Sacramento	Self-binding harvester.
Stanton, Thomson & Co.	Sacramento	Hay pitching machine.
Stanton, Thomson & Co.	Sacramento	Corn planter, horse power.
Stanton, Thomson & Co.	Sacramento	Harrow.
Stanton, Thomson & Co.	Sacramento	One-horse cultivator.
Stanton, Thomson & Co.	Sacramento	Harrow, pulverizer, and leveler.
S. C. H. Agricultural W'ks.	Stockton	Combined header and thrasher.
Daniel Best	San Leandro	Combined header and thrasher, steam power.
Benicia Agricultural W'ks.	Benicia	Broadcast sowing machine.
Benicia Agricultural W'ks.	Benicia	Harrow.
Benicia Agricultural W'ks.	Benicia	Cultivator.
Benicia Agricultural W'ks.	Benicia	One-horse cultivator.
Benicia Agricultural W'ks.	Benicia	Weed cutter.
Baker & Hamilton	Sacramento	Wheat drill.
Baker & Hamilton	Sacramento	Grain broadcast sowing machine.
Baker & Hamilton	Sacramento	Mowing machine.
Baker & Hamilton	Sacramento	Reaping machine.
Baker & Hamilton	Sacramento	Combined reaper and mower.
Baker & Hamilton	Sacramento	Power corn planter.
Baker & Hamilton	Sacramento	Potato planter.
Baker & Hamilton	Sacramento	Harrow.
Baker & Hamilton	Sacramento	Horse hoe.
Baker & Hamilton	Sacramento	Double shovel plow.
H. H. Murray	San Francisco	Ramie cleaning machine.
M. Gutenberg	Sacramento	Field roller and crusher, large.
M. Gutenberg	Sacramento	Field roller and crusher, medium.
Alcolm Macleod	Los Angeles	Combined clod crusher, harrow, pulverizer, leveler, weed cutter, and furrower.

SECOND DEPARTMENT—Continued.

CLASS IV—AGRICULTURAL MACHINES.

EXHIBITOR.	Address.	Articles Exhibited.
The Aërmoter Co.	Sacramento	One 8-foot Aërmoter wind
The Aërmoter Co.	Sacramento	One 12-foot Aërmoter wind
The Aërmoter Co.	Sacramento	One tilting tower for wind
Huntington-Hopkins Co.	Sacramento	Platform
Schaw, Ingram, Batcher & Co.	Sacramento	Platform
Pacific Manufacturing Co.	San Francisco	Wind
Stanton, Thomson & Co.	Sacramento	Wind
L. L. Lewis & Co.	Sacramento	Refriger
S. C. H. Agricultural W'ks.	Stockton	Grain
S. C. H. Agricultural W'ks.	Stockton	ing attachment for combined harrow
Jos. Wagner	San Francisco	Grain cleaner (Independent)
Jos. Wagner	San Francisco	Feed
Klees & Files	Sacramento	Barley
Klees & Files	Sacramento	Grain cleaner (Independent)
St. Clair Manufacturing Co.	Sacramento	Fanning
Holbrook, Merrill & Stetson	Davisville	Wind
Benicia Agricultural W'ks	Sacramento	Refriger
H. L. Hutchinson	Benicia	Farm feed
H. L. Hutchinson	San Francisco	Platform
Armes & Dallam	San Francisco	Stock
F. J. Johnston	San Francisco	Butter w
R. F. Osborn	Sacramento	Farm
	San Francisco	Refriger

CLASS V—TOOLS AND HOUSEHOLD IMPLEMENTS.

EXHIBITOR.	Address.	Articles Exhibited.
Deere Implement Co.	San Francisco	Garden seed
E. W. Melvin	Sacramento	Newbecker washing ma
A. S. Hopkins & Bro.	Sacramento	Butter w
A. S. Hopkins & Bro.	Sacramento	Improved Western washing ma
A. S. Hopkins & Bro.	Sacramento	Clothes w
A. S. Hopkins & Bro.	Sacramento	Clothes-horse to occupy the least
Schaw, Ingram, Batcher & Co.	Sacramento	Cabbage
Schaw, Ingram, Batcher & Co.	Sacramento	Sausage-meat cutter and
Schaw, Ingram, Batcher & Co.	Sacramento	Clothes w
Schaw, Ingram, Batcher & Co.	Sacramento	Wine and cider
Schaw, Ingram, Batcher & Co.	Sacramento	Pruning
S. J. Smith	Sacramento	Pruning
Stanton, Thomson & Co.	Truckee	Pride of the West washing ma
Stanton, Thomson & Co.	Sacramento	Display of haying and harvesting
Stanton, Thomson & Co.	Sacramento	Road
Stanton, Thomson & Co.	Sacramento	Excavating
W. C. Hamilton	San José	Hamilton fruit
S. C. H. Agricultural W'ks	Stockton	Road
W. C. Farnsworth	Sacramento	Fruit
Baker & Hamilton	Sacramento	Display of haying and harvesting
Baker & Hamilton	Sacramento	Garden seed
Benicia Agricultural W'ks	Benicia	Road
D. D. Wass	San Francisco	Fruit
Armes & Dallam	San Francisco	Display of dairy ma
Armes & Dallam	San Francisco	
Armes & Dallam	San Francisco	Washing ma
Commercial Machine W'ks	San Francisco	Wine and cider
Baker & Hamilton	Sacramento	Fruit g

SECOND DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Baker & Hamilton	Sacramento	Pruning shears.
Mosher, Chandler & Co.	San Francisco	Fruit grader.
Armes & Dallam	San Francisco	Butter worker.
Huntington-Hopkins Co.	Sacramento	Cabbage cutter.
Huntington-Hopkins Co.	Sacramento	Sausage-meat cutter and stuffer.
Huntington-Hopkins Co.	Sacramento	Pruning shears.
Huntington-Hopkins Co.	Sacramento	Pruning knives.
James Linforth	San Francisco	Fruit drier (Zimmerman).

CLASS VI—PLOWS.

EXHIBITOR.	Address.	Articles Exhibited.
Matteson & Williamson	Stockton	1-4 Gang plow and seeder combined.
Deere Implement Co.	San Francisco	Gang plow.
Deere Implement Co.	San Francisco	Sulky plow.
Deere Implement Co.	San Francisco	Stubble plow.
Deere Implement Co.	San Francisco	Sod plow.
Deere Implement Co.	San Francisco	Steel plow.
Deere Implement Co.	San Francisco	Cast-iron plow.
Deere Implement Co.	San Francisco	Sidehill plow.
Deere Implement Co.	San Francisco	One-horse plow.
Deere Implement Co.	San Francisco	Chilled plow.
Deere Implement Co.	San Francisco	Plow for all purposes.
Deere Implement Co.	San Francisco	Vineyard plow.
Schaw, Ingram, Batcher & Co.	Sacramento	Gang plow.
Schaw, Ingram, Batcher & Co.	Sacramento	Cast-iron plow.
Schaw, Ingram, Batcher & Co.	Sacramento	One-horse plow.
Schaw, Ingram, Batcher & Co.	Sacramento	Chilled plow.
Schaw, Ingram, Batcher & Co.	Sacramento	Plow for all purposes.
Schaw, Ingram, Batcher & Co.	Sacramento	Vineyard plow.
San José Agricultural W'ks.	San José	Training cart.
San José Agricultural W'ks.	San José	Training cart (common).
San José Agricultural W'ks.	San José	Pleasure cart.
San José Agricultural W'ks.	San José	Road cart.
San José Agricultural W'ks.	San José	Spring business wagon.
Stanton, Thomson & Co.	Sacramento	Gang plow.
Stanton, Thomson & Co.	Sacramento	Sulky plow.
Stanton, Thomson & Co.	Sacramento	Stubble plow.
Stanton, Thomson & Co.	Sacramento	Sod plow.
Stanton, Thomson & Co.	Sacramento	Steel plow.
Stanton, Thomson & Co.	Sacramento	Sidehill plow.
Stanton, Thomson & Co.	Sacramento	One-horse plow.
Stanton, Thomson & Co.	Sacramento	Chilled plow.
Stanton, Thomson & Co.	Sacramento	Plow for all purposes.
Stanton, Thomson & Co.	Sacramento	Vineyard plow.
Stanton, Thomson & Co.	Sacramento	Dynamometer.
S. C. H. Agricultural W'ks.	Stockton	Gang plow.
S. Gerow	Lafayette	Sidehill plow.
Baker & Hamilton	Sacramento	Cast-iron plow.
Baker & Hamilton	Sacramento	Chilled plow.
Benicia Agricultural W'ks.	Benicia	Gang plow.
Benicia Agricultural W'ks.	Benicia	Sulky plow.
Benicia Agricultural W'ks.	Benicia	Stubble plow.
Benicia Agricultural W'ks.	Benicia	Sod plow.
Benicia Agricultural W'ks.	Benicia	Steel plow.
Benicia Agricultural W'ks.	Benicia	Subsoil plow.
Benicia Agricultural W'ks.	Benicia	Sidehill plow.
Benicia Agricultural W'ks.	Benicia	One-horse plow.
Benicia Agricultural W'ks.	Benicia	Plow for all purposes.
Benicia Agricultural W'ks.	Benicia	Vineyard plow.

SECOND DEPARTMENT—Continued.

CLASS VII—VEHICLES.

EXHIBITOR.	Address.	Articles Exhibited.
Charles Ott	Sacramento	Open bus
Charles Ott	Sacramento	Spring market wa
Indianapolis Wagon Co.	San Francisco	Closed family car
Indianapolis Wagon Co.	San Francisco	Two-seated open wa
Indianapolis Wagon Co.	San Francisco	Business wa
Indianapolis Wagon Co.	San Francisco	Carriage spr
Parry Manufacturing Co.	San Francisco	Pleasure
Parry Manufacturing Co.	San Francisco	Training
Parry Manufacturing Co.	San Francisco	Spring market wa
A. Meister	Sacramento	Two open family car
A. Meister	Sacramento	Three top bus
A. Meister	Sacramento	Open bu
A. Meister	Sacramento	Two-seated open wa
A. Meister	Sacramento	Trotting wa
A. Meister	Sacramento	Two spring market wa
A. Meister	Sacramento	Pleasure
A. Meister	Sacramento	Training
A. Meister	Sacramento	Two ladies' pha
A. Meister	Sacramento	Business wa
A. Meister	Sacramento	Cab for chil
A. Meister	Sacramento	Carriage wa
A. Meister	Sacramento	Carriage mate
A. Meister	Sacramento	Park pha
A. Meister	Sacramento	Cab
Huntington-Hopkins Co.	Sacramento	Carriage spr
J. F. Hill	Sacramento	Open family car
J. F. Hill	Sacramento	Two-seated open wa
J. F. Hill	Sacramento	Single-seated trotting wa
J. F. Hill	Sacramento	Top b
J. F. Hill	Sacramento	Spring market wa
J. F. Hill	Sacramento	Training
J. F. Hill	Sacramento	Track
J. F. Hill	Sacramento	Ladies' pha
J. F. Hill	Sacramento	Business wa
Stanton, Thomson & Co.	Sacramento	Farm wagon for general pur
Studebaker Bros.	San Francisco	Closed family car
Studebaker Bros.	San Francisco	Open family car
Studebaker Bros.	San Francisco	Top b
Studebaker Bros.	San Francisco	Pleasure
Studebaker Bros.	San Francisco	Ladies' pha
Studebaker Bros.	San Francisco	Cab for chil
Baker & Hamilton	Sacramento	Farm wagon for general pur
Benicia Agricultural W'ks.	Benicia	Two-seated open wa
Benicia Agricultural W'ks.	Benicia	Farm wagon for general pur
Benicia Agricultural W'ks.	Benicia	Pleasure
Columbus Buggy Co.	Sacramento	Open family car
Columbus Buggy Co.	Sacramento	Top b
Columbus Buggy Co.	Sacramento	Ladies' pha
Columbus Buggy Co.	Sacramento	Physicians' pha
Columbus Buggy Co.	Sacramento	Cab for chil
San José Agricultur'l W'ks.	San José	Three training
San José Agricultur'l W'ks.	San José	Training cart (com
San José Agricultur'l W'ks.	San José	Pleasure
San José Agricultur'l W'ks.	San José	Road
San José Agricultur'l W'ks.	San José	Spring business w

SECOND DEPARTMENT—Continued.

CLASS VIII—MISCELLANEOUS.

EXHIBITOR.	Address.	Articles Exhibited.
E. Beach	Routiers	Patent grain saver.
inger Manufacturing Co.	Sacramento	Steam power table
		for manufacturing sewing machines.
inger Manufacturing Co.	Sacramento	Display of family sewing machines.
inger Manufacturing Co.	Sacramento	Cobbler sewing machine.
eborn Steele.	San Francisco	Sewing machine sample work.
Indianapolis Wagon Co.	San Francisco	Stump puller.
Parry Manufacturing Co.	San Francisco	Display of short-turn gear vehicles.
W. Pendleton	San Francisco	Display of carts.
		Automatic adjustable
		and extension pole or shaft coupling.
eeere Implement Co.	San Francisco	Vineyard gang plow.
eeere Implement Co.	San Francisco	Two-horse cultivator.
eeere Implement Co.	San Francisco	Disk harrow.
eeere Implement Co.	San Francisco	Three-horse equalizer.
eeere Implement Co.	San Francisco	Garden weeder.
P. P. Gregory & Co.	San Francisco	Reversible road grad'g machine (Austin).
P. P. Gregory & Co.	San Francisco	Ditcher and grader (New Era).
Jacob Price	San Leandro	Plowing attachment for traction engine.
Jacob Price	San Leandro	Steam plowing outfit, comprising traction engine and plowing attachment.
Smith McGarvin	San José	Fruit truck.
J. Pommer	Sacramento	Display sewing machines for family use.
Stanton, Thomson & Co.	Sacramento	Disk harrow.
Stanton, Thomson & Co.	Sacramento	Wagon jack.
Stanton, Thomson & Co.	Sacramento	Windmill pump.
Stanton, Thomson & Co.	Sacramento	Tule sulky plow.
C. H. Agricultural W'ks.	Stockton	Header.
C. H. Agricultural W'ks.	Stockton	Cable street car.
Hendy Machine Co.	San Francisco	Wood pulleys (Reeves).
Hendy Machine Co.	San Francisco	Gas and water pipe.
M. Lash & Co.	Sacramento	Ice cream freezer.
aker & Hamilton	Sacramento	Bolster spring.
aker & Hamilton	Sacramento	Corn cultivator.
aker & Hamilton	Sacramento	Sickle grinder.
aker & Hamilton	Sacramento	Warehouse hose reel.
Benicia Agricultural W'ks.	Benicia	Garden wheelbarrow.
Benicia Agricultural W'ks.	Benicia	Warehouse trucks.
Benicia Agricultural W'ks.	Benicia	Circular sawing machine.
Benicia Agricultural W'ks.	Benicia	Display of sewing machines.
Benicia Agricultural W'ks.	Benicia	Short-curve car wheel and axle.
Benicia Agricultural W'ks.	Benicia	Whim
Benicia Agricultural W'ks.	Benicia	for mining purposes (Common Sense).
Benicia Agricultural W'ks.	Benicia	Pump for boiler feed (Marches).
Benicia Agricultural W'ks.	Benicia	Family ice machine.
Benicia Agricultural W'ks.	Benicia	Domestic ice and water-cooling machine.
Benicia Agricultural W'ks.	Benicia	Pruning saw.
Benicia Agricultural W'ks.	Benicia	Gas and gasoline engine.
Benicia Agricultural W'ks.	Benicia	Bagholder.
Benicia Agricultural W'ks.	Benicia	Improved cream separator.
Benicia Agricultural W'ks.	Benicia	Special exhibits representing trade, commerce, and manufacture of California.
Benicia Agricultural W'ks.	Benicia	Improved fruit cylinder grader.
Benicia Agricultural W'ks.	Benicia	Display of submarine cables.
Benicia Agricultural W'ks.	Benicia	Section ladder.
Benicia Agricultural W'ks.	Benicia	Stepladder.
Benicia Agricultural W'ks.	Benicia	Ladder step.
Benicia Agricultural W'ks.	Benicia	Ladder scaffold.
Benicia Agricultural W'ks.	Benicia	Ladder bracket.
Benicia Agricultural W'ks.	Benicia	Avery oil burner.
Benicia Agricultural W'ks.	Benicia	Fruit Queen (fruit
Benicia Agricultural W'ks.	Benicia	drier for drying fruit in stoves or ranges).
Benicia Agricultural W'ks.	Benicia	Grape crusher and stemmer combined.
Benicia Agricultural W'ks.	Benicia	Display of horse shoes.
Benicia Agricultural W'ks.	Benicia	Garden and lawn sprayer.
Benicia Agricultural W'ks.	Benicia	Tilting tower for windmill.
Benicia Agricultural W'ks.	Benicia	Force
Benicia Agricultural W'ks.	Benicia	feed seeder with cultivator attachment.

SECOND DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Stanton, Thomson & Co.	Sacramento	feed seeder with cultivator attachment
Baker & Hamilton	Sacramento	feed seeder with cultivator attachment
W. B. Ewer	San Francisco	Apple

GOLD MEDAL.

EXHIBITOR.	Address.	Articles Exhibited.
S. C. H. Agricultural Wk's	Stockton	Display of agricultural machinery and one cable street
Deere Implement Co.	San Francisco	Display of agricultural implements
Baker & Hamilton	Sacramento	Display of agricultural implements
A. Meister	Sacramento	Display of vehicles and machinery
Stanton, Thompson & Co.	Sacramento	Agricultural implements, machinery, tools, plows, wagons
Parry Manufacturing Co.	San Francisco	Display of vehicles and machinery
Indianapolis Wagon Co.	Sacramento	Display of short-turn gear vehicles
Studebaker Bros.	San Francisco	Display of vehicles and machinery
J. F. Hill	Sacramento	Display of vehicles and machinery
Benicia Agricultural Wks.	Benicia	Agricultural machinery, tools, implements, plows, vehicles

THIRD DEPARTMENT.

CLASS I—CLOTHING AND KINDRED TEXTURES.

EXHIBITOR.	Address.	Articles Exhibited.
Carlson-Currier Mfg. Co.	San Francisco	of silk hosiery, American manufacture
Gattmann & Wilson	Sacramento	Collection of furs, eight
Gattmann & Wilson	Sacramento	Display of bolting
Gattmann & Wilson	Sacramento	Display of dry
Gattmann & Wilson	Sacramento	Display of fancy
Mrs. H. Ladd	Sacramento	Best knitted
Chas. J. Fredericks	Sacramento	Exhibition of men's hats and
Chas. J. Fredericks	Sacramento	
Chas. J. Fredericks	Sacramento	
P. Beamish	San Francisco	Gentleman's
P. Beamish	San Francisco	Exhibit of neckties and
Levi Strauss & Co.	San Francisco	Display of woolen goods, by one
Ingram & Bird	Sacramento	Exhibit of carpets and
Ingram & Bird	Sacramento	Fifteen yards of woolen
Ingram & Bird	Sacramento	Window curtains, cornices, and
Ingram & Bird	Sacramento	Exhibit of window shades and
Mrs. Belle Quarles	Sacramento	Two Turkish
California Cotton Mills	East Oakland	Display of towels and table
California Cotton Mills	East Oakland	Ten pounds of dress
California Cotton Mills	East Oakland	Ten yards of cloth of flax
California Cotton Mills	East Oakland	sack twine, California manu
California Cotton Mills	East Oakland	Ten yards of Cotton
California Cotton Mills	East Oakland	and toweling, California manu
California Cotton Mills	East Oakland	Stocking

THIRD DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
California Cotton Mills	East Oakland	Carpet warp.
California Cotton Mills	East Oakland	Exhibit of burlap rugs.
Mrs. G. W. Thielkel	Newcastle	Exhibit of burlap rugs.
Mrs. M. H. Ober	San Francisco	Ladies' shoulder braces and corsets.
W. H. Murray	San Francisco	Mackinac blanket.

CLASS II—NEEDLE, SHELL, AND WAXWORK.

EXHIBITOR.	Address.	Articles Exhibited.
Mrs. M. E. Curtis	Sacramento	Display of lace made by hand, not less than five pieces.
Mrs. H. C. Briggs	Sacramento	Embroidered silk quilt.
Mrs. Edith Hughson	Sacramento	Variety of porcelain painting, not less than twelve pieces.
Mrs. Wm. East	Chico	Embroidered table scarf.
Mrs. Wm. East	Chico	Chenille embroidered ottoman.
Mrs. Wm. East	Chico	Embroidered chair seat and back.
Mrs. Wm. East	Chico	Fire screen.
Mrs. Wm. East	Chico	Sofa cushion in arrasene.
Mrs. Wm. East	Chico	Sofa cushion in wash crewel.
Mrs. Wm. East	Chico	Sofa cushion in Russian sorouto.
Mrs. Wm. East	Chico	Embroidery.
Mrs. Wm. East	Chico	Renaissance embroidery in rope silk.
Mrs. Wm. East	Chico	Embroidered carriage afghan.
Mrs. Wm. East	Chico	Hammered brass.
Mrs. Wm. East	Chico	Embroidered wall panel.
Mrs. Wm. East	Chico	Spanish work.
Mrs. Wm. East	Chico	Display of paper flowers.
Mrs. Wm. East	Chico	Bureau scarf in drawn work.
Mrs. Wm. East	Chico	Fancy towel.
Mrs. Wm. East	Chico	Crochet table scarf.
Mrs. Wm. East	Chico	Crochet bureau scarf.
Mrs. Wm. East	Chico	Fancy picture drape.
Mrs. Wm. East	Chico	Fancy wall pocket.
Mrs. Wm. East	Chico	Photograph holder.
Mrs. Wm. East	Chico	Fancy butterfly.
Mrs. Wm. East	Chico	Arrasene embroidery (seven pieces).
Mrs. Wm. East	Chico	Crochet lamp mat.
Mrs. Wm. East	Chico	Lambrequin embroidered in arrasene.
Mrs. Wm. East	Chico	Display of kensington embroidery.
Mrs. Wm. East	Chico	Silk embroidery on flannel.
Mrs. Wm. East	Chico	Embroidered table cover (four ends).
Mrs. Wm. East	Chico	Display of linen embroidery.
Mrs. Wm. East	Chico	Display of lace made by hand.
Mrs. Wm. East	Chico	Crochet shawl.
Mrs. Wm. East	Chico	Lounge afghan.
Mrs. Wm. East	Chico	Knit undervest.
Mrs. Wm. East	Chico	Crochet skirt.
Mrs. Wm. East	Chico	Display of fancy tidies.
Mrs. Wm. East	Chico	Dining table mats.
Mrs. Wm. East	Chico	Ribbon drape.
Mrs. Wm. East	Chico	Buffet or sideboard scarf.
Mrs. Wm. East	Chico	Photograph pocket.
Mrs. Wm. East	Chico	Toilet set in silk.
Mrs. Wm. East	Chico	Chenille embroidered toilet set.
Mrs. Wm. East	Chico	Child's afghan (crochet).
Mrs. Wm. East	Chico	Etched tidy.
Mrs. Wm. East	Chico	Largest and handsomest display of articles made by one lady.
Mrs. Maye Carroll	Sacramento	Spanish drawn work.
Mrs. Maye Carroll	Sacramento	Display of articles made by one lady.
Mrs. G. Graves	Sacramento	Honiton lace work.
Mrs. G. Graves	Sacramento	Spanish drawn work.
Mrs. G. Graves	Sacramento	Silk embroidery on flannel.
Mrs. G. Graves	Sacramento	Painted table scarf (two ends).

THIRD DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Mrs. G. Graves	Sacramento	Display of made by hand, not less than five pieces
Mrs. G. Graves	Sacramento	Embroidered table cover (four ends)
Mrs. G. Graves	Sacramento	Embroidered ottoman cover
Mrs. F. T. Robinson	Florin	Embroidered silk
Mrs. F. T. Robinson	Florin	Embroidered table scarf (two ends)
Mrs. E. C. Atkinson	Sacramento	Embroidered bedspread
Mrs. E. C. Atkinson	Sacramento	Embroidered table cover (four ends)
Mrs. E. C. Atkinson	Sacramento	Embroidered table scarf (two ends)
Mrs. E. C. Atkinson	Sacramento	Painted paper
Mrs. E. C. Atkinson	Sacramento	Linen embroidery
Mrs. H. D. Nash	Sacramento	Persian embroidery
Mrs. H. D. Nash	Sacramento	Table scarf (embroidered)
Mrs. H. D. Nash	Sacramento	Turkish embroidery
Mrs. H. D. Nash	Sacramento	Spanish drawn work
Mrs. H. D. Nash	Sacramento	Arrasene embroidery
Mrs. H. D. Nash	Sacramento	Pillow shams, Spanish drawn work
Mrs. H. D. Nash	Sacramento	Spanish drawn work
Mrs. E. C. Atkinson	Sacramento	Renaissance embroidery in rope silk
Mrs. E. C. Atkinson	Sacramento	Painted table scarf (two ends)
Misses Brothers	Sacramento	Display of millinery
Misses Brothers	Sacramento	Velvet bag
Misses Brothers	Sacramento	Silk bag
Misses Brothers	Sacramento	of feathers from California raised
Misses Brothers	Sacramento	Variety of artificial flowers
J. O. Gould	Roseville	Oldest patchwork quilt (38 years)
Miss Belle Johnson	Sacramento	Display of made by hand, not less than five pieces
Mrs. Jos. W. Johnson	Sacramento	Decorative painting on
Mrs. Geo. D. Stewart	Sacramento	Decorative painting on
Mrs. Geo. D. Stewart	Sacramento	Decorative painting on birch
Mrs. Geo. D. Stewart	Sacramento	Decorative painting on orange
Mrs. Geo. D. Stewart	Sacramento	Decorative painting on
Mrs. Geo. D. Stewart	Sacramento	Decorative painting on bolings
Mrs. Geo. D. Stewart	Sacramento	Decorative painting on
Mrs. Geo. D. Stewart	Sacramento	Decorative painting on
Mrs. A. J. Gardiner	Sacramento	Hand sewing (four pieces)
Mrs. A. J. Gardiner	Sacramento	Bead work by hand (three pieces)
Mrs. A. J. Gardiner	Sacramento	Crochet
Mrs. A. J. Gardiner	Sacramento	Ornamental
Mrs. A. J. Gardiner	Sacramento	Display of paper flowers
Mrs. D. L. Townsend	Sacramento	Crochet bedspread
Mrs. W. W. Willis	Sacramento	Honiton lace
Mrs. W. W. Willis	Sacramento	Needle work
Mrs. W. W. Willis	Sacramento	Carriage seat
Mrs. M. J. Mayhew	Sacramento	Two crazy patchwork quilts
Mrs. M. J. Mayhew	Sacramento	Silk and lace spread and
Mrs. M. B. Dudley	San Francisco	Two patchwork quilts
Mrs. M. B. Dudley	San Francisco	Crazy patchwork quilts
Mrs. M. B. Dudley	San Francisco	Embroidered silk
Mrs. M. B. Dudley	San Francisco	Painted table scarf (two ends)
Mrs. M. B. Dudley	San Francisco	Crochet
Mrs. M. B. Dudley	San Francisco	Silk plain
Mrs. M. B. Dudley	San Francisco	Embroidered
Mrs. S. J. Conrad	Sacramento	toilet set, not less than three pieces
Mrs. H. Ladd	Sacramento	Four pairs knit wool stockings
Mrs. H. Ladd	Sacramento	Darned net, not less than three pieces
Mrs. C. A. Patrick	Sacramento	Shell
Mrs. C. A. Patrick	Sacramento	of children's clothing, California
Mrs. Geo. Muddox	Sacramento	Embroidered table cover (four ends)
Mrs. K. Lawton	Sacramento	Crochet bedspread
Mrs. F. R. Griffiths	Sacramento	Patchwork
Mrs. C. S. Kendall	Humboldt	Spanish drawn work
Mrs. C. S. Kendall	Humboldt	Pair of knit wool stockings
Mrs. C. S. Kendall	Humboldt	Knit
Mrs. E. C. Atkinson	Sacramento	and handsomest display of articles made wholly by miss or lady exhibiting

THIRD DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Miss P. C. Brown	Sacramento	Embroidered table cover (four ends)
Miss P. C. Brown	Sacramento	Embroidered sofa cushion
Miss P. C. Brown	Sacramento	Embroidered handkerchief
Miss P. C. Brown	Sacramento	Kensington embroidery with crewel on wool goods
Miss P. C. Brown	Sacramento	Display of lace made by hand, not less than five pieces
Miss P. C. Brown	Sacramento	Display of linen embroidery
Miss P. C. Brown	Sacramento	Spanish drawn work
Miss P. C. Brown	Sacramento	Bead work by hand
Miss P. C. Brown	Sacramento	Renaissance embroidery in rope silk
Miss P. C. Brown	Sacramento	Gobelin embroidery
Miss P. C. Brown	Sacramento	Alliance embroidery
Miss P. C. Brown	Sacramento	Kensington embroidery
Miss P. C. Brown	Sacramento	One table scarf (two ends)
Miss P. C. Brown	Colusa	Crazy patchwork quilt
Miss P. C. Brown	Sacramento	Applique work quilt
Miss P. C. Brown	Sacramento	Silk patchwork quilt
Miss P. C. Brown	Sacramento	Hearth rug, hand made
Miss P. C. Brown	Sutter Creek	Crochet bedspread
Miss P. C. Brown	Sacramento	Two crazy patchwork quilts
Miss P. C. Brown	Sacramento	Spanish drawn work
Miss P. C. Brown	Sacramento	Two embroidered table scarfs, two ends
Miss P. C. Brown	Sacramento	Two embroidered fire screens
Miss P. C. Brown	Sacramento	Embroidered wall panel
Miss P. C. Brown	Sacramento	Four embroidered wall banners
Miss P. C. Brown	San Francisco	Kensington embroidery with floss on satin
Miss P. C. Brown	San Francisco	Embroidered sofa pillow and cushion
Miss P. C. Brown	San Francisco	Embroidered dressing gown
Miss P. C. Brown	San Francisco	Embroidered table cover (four ends)
Miss P. C. Brown	San Francisco	Embroidered table scarf (two ends)
Miss P. C. Brown	San Francisco	Persian embroidery
Miss P. C. Brown	San Francisco	Surface plush painting
Miss P. C. Brown	San Francisco	Best applique work
Miss P. C. Brown	San Francisco	Display of linen embroidery
Miss P. C. Brown	San Francisco	Embroidered necktie case
Miss P. C. Brown	San Francisco	Largest and handsomest display of articles made wholly by lady or miss exhibiting same
Miss P. C. Brown	Sacramento	Embroidered silk quilt
Miss P. C. Brown	Sacramento	Crazy patchwork quilts
Miss P. C. Brown	Sacramento	Raised wool work
Miss P. C. Brown	Sacramento	Display of outline embroidery
Miss P. C. Brown	Elk Grove	Embroidered table scarf (two ends)
Miss P. C. Brown	Sacramento	Crazy patchwork quilt
Miss P. C. Brown	Sacramento	Embroidered table scarf
Miss P. C. Brown	Sacramento	Arrasene embroidery
Miss P. C. Brown	Sacramento	Display of lace made by hand, not less than five pieces
Miss P. C. Brown	Sacramento	Display of paper flowers
Miss P. C. Brown	San Francisco	Painting on ivory
Miss P. C. Brown	Sacramento	Display of lace made by hand, not less than five pieces
Miss P. C. Brown	Sacramento	Decorative painting on velvet
Miss P. C. Brown	Sacramento	Decorative painting on silk
Miss P. C. Brown	Sacramento	Decorative painting on plush
Miss P. C. Brown	Sacramento	Decorative painting on linen
Miss P. C. Brown	San Francisco	Embroidered wall panel
Miss P. C. Brown	San Francisco	Embroidered ottoman cover
Miss P. C. Brown	San Francisco	Renaissance embroidery in rope silk
Miss P. C. Brown	San Francisco	Gobelin embroidery
Miss P. C. Brown	San Francisco	Kensington embroidery
Miss P. C. Brown	Sacramento	Embroidered ottoman cover
Miss P. C. Brown	Sacramento	Three hearth rugs, hand made
Miss P. C. Brown	Sacramento	Display of paper flowers

THIRD DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
SPECIAL PREMIUMS.		
Mrs. H. C. Briggs	Sacramento	Piece of decorative painting
Miss Edith Hughson	Sacramento	Piece of work from a school of design
Miss Edith Hughson	Sacramento	Piece of painting on porcelain
Miss Edith Hughson	Sacramento	Piece of decorative painting
Miss Edith Hughson	Sacramento	Piece of painting on porcelain
Mrs. L. Schubert	Sacramento	Piece of embroidery work made by a lady
Mrs. Laura A. Morton	San Francisco	Piece of embroidery work made by a lady
Mrs. W. Willis	Sacramento	Piece of embroidery work made by a lady
JUVENILE.		
Miss M. Kelly	Sacramento	Patchwork
Miss M. Kelly	Sacramento	Best knitted
Miss M. Kelly	Sacramento	Worsted embroidery
Miss M. Kelly	Sacramento	Knitted slip
Miss M. Kelly	Sacramento	Fancy
Sacramento Free Kindergarten School	Sacramento	Display of kindergarten work
Beryl Patrick	Sacramento	Mostly made dress by a girl eleven years
Beryl Patrick	Sacramento	Two pieces of Spanish drawn
Agnes Hopper	Sacramento	Mostly made dress by a girl thirteen years
Ethel Elworthy	Sacramento	Mostly made dress by a girl twelve years
Edna Elworthy	Sacramento	Patchwork by a girl four years
Mary Ann Workman	Los Angeles	Silk patchwork
Mary Ann Workman	Los Angeles	Silk embroidery
Estella M. Stewart	Sacramento	Outline embroidery

CLASS III—PRINTING, LITHOGRAPHS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
E. J. Shattuck	San Francisco	Printing
W. H. Murray	San Francisco	Display of acme void engraving
Francis & Valentine	San Francisco	Specimen of printing (paper)
Daniel Norcross	San Francisco	Specimen of printing (paper)

CLASS IV—MISCELLANEOUS.

EXHIBITOR.	Address.	Articles Exhibited.
Mrs. H. H. King	Sacramento	Hair
Mrs. A. J. Gardiner	Sacramento	Home made
Mrs. A. J. Gardiner	Sacramento	Suit of crochet underwear
A. J. Pommer	Sacramento	Display of embroidery work made on sewing machine
Mrs. M. B. Dudley	San Francisco	Two pin
Mrs. M. B. Dudley	San Francisco	Worsted
W. S. Enos	Davisville	One knit collar, by a lady with one
W. S. Enos	Davisville	One splasher, by a girl six years
W. S. Enos	Davisville	Two baby caps five years old, and worn by three generations
W. S. Enos	Davisville	One spread, made by hand by a girl years old over one hundred years
W. S. Enos	Davisville	piece fancy work, made by a girl years old over one hundred years
Mrs. C. A. Patrick	Sacramento	Twenty pieces ladies' underwear
Mrs. C. A. Patrick	Sacramento	Three fancy dresses

THIRD DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
George Muddox	Sacramento	Two crochet tidies.
Miss P. C. Brown	Sacramento	Pillow shams, in Venetian embroidery.
Miss P. C. Brown	Sacramento	Embroidery on bolting cloth, in single thread.
Mr. I. T. Barrett	Sacramento	Two fancy work bags, made of muskmelon seeds.
Mr. W. W. Willis	Sacramento	Darned net pocket handkerchief.
Mr. A. Krull	Sacramento	Fancy floor rug.
Mr. R. Davis	Sacramento	One pair silk-woven curtains.
Mr. R. Davis	Sacramento	One crazy patchwork curtain.
Mr. William East	Chico	Fancy apron.
Mr. Levi Strauss & Co.	San Francisco	Display of overalls.
Mr. Rohnerville	Rohnerville	Display of buckskin suits.
Mr. Elk Grove	Elk Grove	One picture scarf.
Mr. Geo. W. Schwamb	Sacramento	Etched lambrequin.
Mr. Geo. W. Schwamb	Sacramento	Etched lace curtains.
Mr. Geo. W. Schwamb	Sacramento	Tinsel banner.
Mr. Geo. W. Schwamb	Sacramento	Tinsel monogram.
Mr. Geo. W. Schwamb	Sacramento	Embroidered curtains.
Mr. Geo. W. Schwamb	Sacramento	Satin banner.
Mr. Geo. W. Schwamb	Sacramento	Etching of horses' heads.
Mr. Beamish	San Francisco	Sanitary wool underwear.
Mr. Levi Strauss & Co.	San Francisco	Copper-riveted clothing.
Mr. M. H. Ober	San Francisco	Display of ladies' union underwear.
Mr. J. Shattuck	San Francisco	Printer's roller composition.
Mr. J. H. Hamilton	Sacramento	Crochet work.
Mr. H. Murray	San Francisco	Display of ramie cloth.

FOURTH DEPARTMENT.

CLASS I—MANUFACTURES OF LEATHER, PAPER, AND RUBBER.

EXHIBITOR.	Address.	Articles Exhibited.
James Longshore	Sacramento	Exhibit of traveling trunks, valises, and bags.
James Longshore	Sacramento	One thirty-six-inch sole leather trunk.
James Longshore	Sacramento	One thirty-two-inch rawhide fiber trunk.
James Longshore	Sacramento	One eighteen-inch toilet bag.
James Longshore	Sacramento	One eighteen-inch alligator bag.
James Longshore	Sacramento	Display of rubber hose and belting.
James Longshore	Sacramento	Display of leather belting.
James Longshore	Sacramento	Display of cordage.
James Longshore	Sacramento	Display of rubber hose and belting.
James Longshore	Sacramento	Display of leather hose and belting.
James Longshore	Sacramento	Display of cordage.
James Longshore	Sacramento	Display of wall paper.
James Longshore	Sacramento	Display of paper hangings and borders.
James Longshore	Sacramento	Display of Mexican saddles.
James Longshore	Sacramento	Display of rubber hose and belting.
James Longshore	San José	Display of Angora goat robes.
James Longshore	San Francisco	Display of paper manufactured in California, not less than two tons.

FOURTH DEPARTMENT—Continued.

CLASS II—WORKED METALS.

EXHIBITOR.	Address.	Articles Exhibited.
Sac. Glass & Crockery Co.	Sacramento	Display of
Sac. Glass & Crockery Co.	Sacramento	Display of table
Sac. Glass & Crockery Co.	Sacramento	Display of plates
Huntington-Hopkins Co.	Sacramento	Display of modern building hardware
Huntington-Hopkins Co.	Sacramento	Display of blacksmithing
Huntington-Hopkins Co.	Sacramento	Display of general hardware
Huntington-Hopkins Co.	Sacramento	Display of mechanics
Huntington-Hopkins Co.	Sacramento	Horseshoes, machine
Huntington-Hopkins Co.	Sacramento	Display of table
Huntington-Hopkins Co.	Sacramento	Display of pocket
Huntington-Hopkins Co.	Sacramento	Display of
Huntington-Hopkins Co.	Sacramento	Exhibit of anti-friction
Huntington-Hopkins Co.	Sacramento	Exhibit of
Huntington-Hopkins Co.	Sacramento	Display of butchers' supplies
Huntington-Hopkins Co.	Sacramento	Axles, California manu
Schaw, Ingram, Batcher & Co.	Sacramento	Display of modern building hardware
Schaw, Ingram, Batcher & Co.	Sacramento	Display of blacksmithing
Schaw, Ingram, Batcher & Co.	Sacramento	Display of general hardware
Schaw, Ingram, Batcher & Co.	Sacramento	Display of
Schaw, Ingram, Batcher & Co.	Sacramento	and steel, Pacific Coast manu
Schaw, Ingram, Batcher & Co.	Sacramento	Axles, California
Schaw, Ingram, Batcher & Co.	Sacramento	Display of mechanics
Schaw, Ingram, Batcher & Co.	Sacramento	Horseshoes, machine
Schaw, Ingram, Batcher & Co.	Sacramento	Display of table
Schaw, Ingram, Batcher & Co.	Sacramento	Display of pocket
Schaw, Ingram, Batcher & Co.	Sacramento	Best circular
Schaw, Ingram, Batcher & Co.	Sacramento	Best mill
Schaw, Ingram, Batcher & Co.	Sacramento	Display of
Schaw, Ingram, Batcher & Co.	Sacramento	Exhibit of anti-friction
Schaw, Ingram, Batcher & Co.	Sacramento	Exhibit of
Schaw, Ingram, Batcher & Co.	Sacramento	Display of butchers' supplies and
Thieben Glass & Crockery Co.	Sacramento	Display of
Thieben Glass & Crockery Co.	Sacramento	Display of plates
Thieben Glass & Crockery Co.	Sacramento	Display of
Holbrook, Merrill & Stetson	Sacramento	Display of copper
Holbrook, Merrill & Stetson	Sacramento	Display of brass
Holbrook, Merrill & Stetson	Sacramento	Display of
Holbrook, Merrill & Stetson	Sacramento	Display of plumbers' goods and
Holbrook, Merrill & Stetson	Sacramento	of kitchen utensils of brass or
Holbrook, Merrill & Stetson	Sacramento	Display of kitchen utensils
Holbrook, Merrill & Stetson	Sacramento	Mill
Thieben Glass & Crock. Co.	Sacramento	Exhibit of lead
Crouch & Lyman	Sacramento	Display of table
Crouch & Lyman	Sacramento	Display of brass
Crouch & Lyman	Sacramento	Display of plumbers' goods and
Crouch & Lyman	Sacramento	Display of chandeliers and
Crouch & Lyman	Sacramento	Exhibit of lead
D. D. Wass	San Francisco	Iron
D. D. Wass	San Francisco	Wire
W. H. Murray	San Francisco	Barbed wire

FOURTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
W. H. Murray	San Francisco	Mill saws.
W. H. Murray	San Francisco	Display of files.

CLASS III—STOVES, CASTINGS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Aitken	Sacramento	Parlor grate.
Aitken	Sacramento	Marbleized stone.
Sac. Glass & Crockery Co.	Sacramento	Ornamental statuary.
Sac. Glass & Crockery Co.	Sacramento	Ornamental fruit and flower stand.
Huntington-Hopkins Co.	Sacramento	Water and steam gates.
L. Lewis & Co.	Sacramento	Cooking stove for wood.
L. Lewis & Co.	Sacramento	Cooking stove for coal.
L. Lewis & Co.	Sacramento	Parlor stove.
L. Lewis & Co.	Sacramento	Cooking range.
L. Lewis & Co.	Sacramento	Gasoline stove.
L. Lewis & Co.	Sacramento	Display of hollow ironware.
L. Lewis & Co.	Sacramento	Portable range.
L. Lewis & Co.	Sacramento	Laundry stove.
Thieben Glass & Crock. Co.	Sacramento	Ornamental statuary.
Thieben Glass & Crock. Co.	Sacramento	Assortment of Japanese ware.
Holbrook, Merrill & Stetson	Sacramento	Cooking stove for wood.
Holbrook, Merrill & Stetson	Sacramento	Cooking stove for coal.
Holbrook, Merrill & Stetson	Sacramento	Parlor stove.
Holbrook, Merrill & Stetson	Sacramento	Gas stove.
Holbrook, Merrill & Stetson	Sacramento	Oil stove.
Holbrook, Merrill & Stetson	Sacramento	Warming furnace.
Holbrook, Merrill & Stetson	Sacramento	Cooking range.
Holbrook, Merrill & Stetson	Sacramento	Specimen of marbleized iron.
Holbrook, Merrill & Stetson	Sacramento	Display of hollow ironware.
Holbrook, Merrill & Stetson	Sacramento	Ornamental fruit and flower stand.
Holbrook, Merrill & Stetson	Sacramento	Farmers' caldron or steamers.
Holbrook, Merrill & Stetson	Sacramento	Portable range.
Holbrook, Merrill & Stetson	Sacramento	Laundry stove.
Holbrook, Merrill & Stetson	Sacramento	Assortment of bathing tubs.
Holbrook, Merrill & Stetson	Sacramento	Water and steam gates.
Crouch & Lyman	Sacramento	Warming furnace and other apparatus.
Crouch & Lyman	Sacramento	Gas and water pipes.
Crouch & Lyman	Sacramento	Steam and water gates.
Crouch & Lyman	Sacramento	Assortment of bathing tubs.
Hendy Machine Co.	San Francisco	Gas and water pipes.
W. H. Murray	San Francisco	Ornamental statuary and zinc work.
James Linforth	San Francisco	Farm bell.

CLASS IV—MUSICAL INSTRUMENTS.

EXHIBITOR.	Address.	Articles Exhibited.
L. Hammer	Sacramento	Display of musical instruments.
L. Hammer	Sacramento	Stringed
L. Hammer	Sacramento	or reed instruments made in California.
L. Hammer	Sacramento	One violoncello.
L. Hammer	Sacramento	One banjo.
L. Hammer	Sacramento	One tenor violin.
L. Hammer	Sacramento	One viola.
L. Hammer	Sacramento	One violin.
L. Hammer	Sacramento	One guitar.
L. Hammer	Sacramento	Banduria.
F. Cooper	Sacramento	General display of musical instruments.
F. Cooper	Sacramento	Upright piano.
F. Cooper	Sacramento	Organ.
F. Cooper	Sacramento	One mandolin.
F. Cooper	Sacramento	Two violins.

FOURTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
J. F. Cooper	Sacramento	Two good
J. F. Cooper	Sacramento	One coaching
J. F. Cooper	Sacramento	Portuguese
J. F. Cooper	Sacramento	Double bass

CLASS V—FURNITURE.

EXHIBITOR.	Address.	Articles Exhibited.
A. Aitken	Sacramento	Wooden
Capital Furniture Co.	Sacramento	Set of bed-room furniture
Capital Furniture Co.	Sacramento	Set of dining-room furniture
Capital Furniture Co.	Sacramento	Set of school furniture
Capital Furniture Co.	Sacramento	Extension
Capital Furniture Co.	Sacramento	Center
Capital Furniture Co.	Sacramento	Dressing bureau
Capital Furniture Co.	Sacramento	Wool mattress
Capital Furniture Co.	Sacramento	Display of furniture
Capital Furniture Co.	Sacramento	Bookcase and library furniture
Capital Furniture Co.	Sacramento	Woven wire spring mattress
Capital Furniture Co.	Sacramento	Wardrobe
Dittmar & Wheat	Sacramento	Set of parlor furniture
Dittmar & Wheat	Sacramento	Set of office furniture
Dittmar & Wheat	Sacramento	Set of parlor furniture
Dittmar & Wheat	Sacramento	Center
Dittmar & Wheat	Sacramento	Display of upholstered furniture
Dittmar & Wheat	Sacramento	Display of willow furniture
John Breuner	Sacramento	Display of furniture
John Breuner	Sacramento	Set of parlor furniture
John Breuner	Sacramento	Bed-room furniture
John Breuner	Sacramento	Set of dining-room furniture
John Breuner	Sacramento	Set of library furniture
John Breuner	Sacramento	Set of office furniture
John Breuner	Sacramento	Set of school furniture
John Breuner	Sacramento	Folding
John Breuner	Sacramento	Extension
John Breuner	Sacramento	Set of parlor furniture
John Breuner	Sacramento	Dressing bureau
John Breuner	Sacramento	Center
John Breuner	Sacramento	Pair of side chairs
John Breuner	Sacramento	Display of upholstered furniture
John Breuner	Sacramento	Hair mattress
John Breuner	Sacramento	Wool mattress
John Breuner	Sacramento	Wardrobe
John Breuner	Sacramento	Sick chair or
John Breuner	Sacramento	Spring mattress
John Breuner	Sacramento	Display of willow furniture
Burr Folding Bed Co.	San Francisco	Folding
Whittier, Fuller & Co.	Sacramento	Center
Ingram & Bird	Sacramento	Display of furniture
Ingram & Bird	Sacramento	Set of parlor furniture
Ingram & Bird	Sacramento	Set of bed-room furniture
Ingram & Bird	Sacramento	Folding
Ingram & Bird	Sacramento	Center
Ingram & Bird	Sacramento	Set of parlor furniture
Ingram & Bird	Sacramento	Dressing bureau
Ingram & Bird	Sacramento	Center
Ingram & Bird	Sacramento	Pair of side chairs
Ingram & Bird	Sacramento	Display of upholstered furniture
Ingram & Bird	Sacramento	Hair mattress

FOURTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Ingram & Bird	Sacramento	Wool mattress.
Ingram & Bird	Sacramento	Spring mattress.
Ingram & Bird	Sacramento	Display of willow furniture.
H. Jones	Colusa	Display of California woods.
A. Clark	San Francisco	Folding bed.
A. Clark	San Francisco	Sofa.
A. Clark	San Francisco	Lounge.
A. Clark	San Francisco	Hair mattress.
A. Clark	San Francisco	Wool mattress.
A. Clark	San Francisco	Spring mattress.
A. Clark	San Francisco	Display of iron furniture.
Charles M. Campbell	Sacramento	Set of bed-room furniture.
Charles M. Campbell	Sacramento	Folding bed.
Charles M. Campbell	Sacramento	Sofa.
Charles M. Campbell	Sacramento	Lounge.
Charles M. Campbell	Sacramento	Set of parlor chairs.
Charles M. Campbell	Sacramento	Dressing bureau.
Charles M. Campbell	Sacramento	Wool mattress.
Charles M. Campbell	Sacramento	Spring mattress.

CLASS VI—WOODENWARE.

EXHIBITOR.	Address.	Articles Exhibited.
Ill Clark	Sacramento	Display of turning lathe work.
S. Hopkins & Bro.	Sacramento	Display of cedarware.
S. Hopkins & Bro.	Sacramento	Display of pineware.
S. Hopkins & Bro.	Sacramento	Display of oakware.
S. Hopkins & Bro.	Sacramento	Display of willowware.
S. Hopkins & Bro.	Sacramento	Display of split-wood baskets.
S. Hopkins & Bro.	Sacramento	Display of osier.
S. Hopkins & Bro.	Sacramento	Display of woodenware.
S. Hopkins & Bro.	Sacramento	Exhibition of broomcorn, brooms, and brushes.
S. Hopkins & Bro.	Sacramento	Assortment of hair brushes.
S. Hopkins & Bro.	Sacramento	Assortment of coopers' ware.
Whittier, Fuller & Co.	Sacramento	Display of window shades.
Whittier, Fuller & Co.	Sacramento	Display of fancy moldings.
Beamish	San Francisco	Display of window shades.
Whittier, Fuller & Co.	Sacramento	Gilt frames.
Geo. W. Schwamb	Sacramento	Fancy moldings.
Geo. W. Schwamb	Sacramento	Twist moldings.

CLASS VII—SPORTING GOODS, APPARATUS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Antington-Hopkins Co.	Sacramento	Double-barrel shotgun.
Antington-Hopkins Co.	Sacramento	Sporting rifle.
Antington-Hopkins Co.	Sacramento	Breech-loading shotgun.
Antington-Hopkins Co.	Sacramento	Display of firearms.
Law, Ingram, Batcher & Co.	Sacramento	Sporting powder.
Law, Ingram, Batcher & Co.	Sacramento	Double-barrel sporting rifle.
Law, Ingram, Batcher & Co.	Sacramento	Breech-loading shotgun.
Law, Ingram, Batcher & Co.	Sacramento	Game bag.
Law, Ingram, Batcher & Co.	Sacramento	Display of firearms.
Law, Ingram, Batcher & Co.	Sacramento	Mining and blasting powder.

FOURTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
D. M. Bishopp.....	Sacramento	Assortment of spectacles and eye-glasses, showing different and shapes of frames and nose-pieces.
D. M. Bishopp	Sacramento	Assortment of all kinds of finished concave, cylindrical, and plano lenses.
D. M. Bishopp	Sacramento	Assortment of all kinds of unfinished concave, cylindrical, and plano lenses.
Upson & Toll	Sacramento	Big
Bandman, Nielson & Co.	San Francisco	Mining and blasting powder.
James A. Barwick	Sacramento	Baron
Baker & Hamilton	Sacramento	Dupont's sporting powder.
H. L. Hutchinson	San Francisco	Thermometer.

CLASS VIII—CHEMICALS.

EXHIBITOR.	Address.	Articles Exhibited.
A. S. Hopkins & Bro.	Sacramento	Display of writing ink.
A. S. Hopkins & Bro.	Sacramento	Display of black ink.
A. S. Hopkins & Bro.	Sacramento	Stove paint.
A. S. Hopkins & Bro.	Sacramento	Axle grease.
Schaw, Ingram, Batcher & Co.	Sacramento	
Schaw, Ingram, Batcher & Co.	Sacramento	Axle grease.
H. C. Nichols	Ferndale	Sample of paint (California).
Coburn, Tevis & Co.	San Francisco	Axle grease, Peerless.
W. H. Murray	San Francisco	Hydraulic pressed wax.
W. H. Murray	San Francisco	White lead (California product).

CLASS IX—STONEWARE, CROCKERY, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
A. Aitken	Sacramento	Flooring.
A. Aitken	Sacramento	Fire.
Sac. Glass & Crockery Co.	Sacramento	Display of table and bar glass.
Sac. Glass & Crockery Co.	Sacramento	Display of queens.
Sac. Glass & Crockery Co.	Sacramento	Display of terra cotta.
Thieben Glass & Crock. Co.	Sacramento	Display of cut and ornamental glass.
Thieben Glass & Crock. Co.	Sacramento	Display of table and bar glass.
George Muddox	Sacramento	Display of queens.
George Muddox	Sacramento	Water.
George Muddox	Sacramento	Sample of drain.
George Muddox	Sacramento	Sewer.
George Muddox	Sacramento	Display of terra cotta.
George Muddox	Sacramento	Fire.
George Muddox	Sacramento	Pressed.
George Muddox	Sacramento	Pottery, various.
George Muddox	Sacramento	Display of stone.
Crouch & Lyman	Sacramento	Roofing.
John Wise	San Francisco	Display of pressed.
John Wise	San Francisco	Display of terra cotta.
W. H. Murray	San Francisco	Display of terra cotta.
Hopper & Schroeder	San Francisco	Display of terra cotta.
Hopper & Schroeder	San Francisco	art stained glass for architectural.
Hopper & Schroeder	San Francisco	mental cut, embossed, and bent.
Hopper & Schroeder	San Francisco	Specimen of ground.

FOURTH DEPARTMENT—Continued.

CLASS X—MINERALS, FOSSILS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Philip Dippel	Lincoln	Suite of the animal kingdom.
ex. Keller	Auburn	Suite of useful minerals of California.
ex. Keller	Auburn	Cabinet of agates, crystallized fossils, and crystallized quartz.

CLASS XI—MARBLE AND GRANITE WORK.

EXHIBITOR.	Address.	Articles Exhibited.
Aitken	Sacramento	Collection of polished marble work.
Aitken	Sacramento	Dressed stone.
Aitken	Sacramento	Display of marbleized slate mantels.
Aitken	Sacramento	Polished granite monument.
California Marble and Building Stone Co.	San Francisco	Dressed stone.

CLASS XII—INCUBATORS.

EXHIBITOR.	Address.	Articles Exhibited.
H. Murray	San Francisco	Package for shipping eggs.

CLASS XIII—MISCELLANEOUS.

EXHIBITOR.	Address.	Articles Exhibited.
an W. Howlett	Winters	"Acme" patent bed brace.
an W. Howlett	Winters	Loughary's excelsior patent gate.
W. Youngman & Co.	Sacramento	Professor Lindsay's improved mechanical system of dress-cutting.
as L. Kinkade	San Francisco	Display of "Callustro."
W. Papst	Sacramento	Microbe killer.
A. H. Works	San José	Mansfield's capillaris.
W. Pendleton	San Francisco	Cephaline.
W. Pendleton	San Francisco	Barton's family medical chest.
nes Scott	Sacramento	Coaline.
L. Hammer	Sacramento	Display of pianos, organs, and musical merchandise.
Glass & Crockery Co.	Sacramento	Display of plain and decorated French chinaware.
Glass & Crockery Co.	Sacramento	Display of imported cut, engraved, and decorated glassware.
Glass & Crockery Co.	Sacramento	Display of art ware.
A. Brophy	Chicago	Helmet solid oil and perfection oil cups.
olling	Oakland	Electric chain belt.
Angeles Box Co.	Los Angeles	Display of fruit baskets.
C. A. Patrick	Sacramento	Twenty pieces of ladies' underwear.
r Folding Bed Co.	San Francisco	Marks' reclining chair.
r Folding Bed Co.	San Francisco	Ross' table washstand.
r Folding Bed Co.	San Francisco	Adjustable reading desk and bookholder.
r Folding Bed Co.	San Francisco	Andrews' cabinet bed.
Bobo	Sacramento	Veterinary medical chest.
Lash & Co.	Sacramento	Dr. Webb's kidney and liver bitters.
on & Toll	Sacramento	Display of bicycles.
on & Toll	Sacramento	Ladies' safety bicycle.
on & Toll	Sacramento	Pair of toe clips.
ittier, Fuller & Co.	Sacramento	Display of mantel mirrors.
ittier, Fuller & Co.	Sacramento	Display of gilt easels.

FOURTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Whittier, Fuller & Co.	Sacramento	Display of gilt
The Rapid Safety Filter Co.	San Francisco	Display of
The Rapid Safety Filter Co.	San Francisco	
The Rapid Safety Filter Co.	San Francisco	Safest
The Rapid Safety Filter Co.	San Francisco	The most rapid
The Rapid Safety Filter Co.	San Francisco	The best rapid safety
The Rapid Safety Filter Co.	San Francisco	Water
Thomas Hildreth	Sacramento	Display of Mexican spurs and
Fred. Watson	Colusa	Three
O. D. Baker	Sacramento	knives made of diamond silver
Alex. Wasson	Rohnerville	California P. & M. electric ream
North Fork Mills	Blue Lakes	Display of soap
North Fork Mills	Blue Lakes	Display of redwood mak
North Fork Mills	Blue Lakes	Display of redwood
North Fork Mills	Blue Lakes	Display of curly and wavy red
North Fork Mills	Blue Lakes	Display of redwood
J. D. McGillivray	San Francisco	Downey's enca
Cal. Mar. & Build. Stone Co.	San Francisco	Colton
S. Koshland	San Francisco	Sheep dip
Ralph Muddox	Sacramento	Collection of
Pierce & Co.	Oakland	National cash
M. P. Farnham	Germantown	Patent stove-pipe
Mohr & Yoerk	Sacramento	Per
George A. Williams	San Francisco	Williams' concentrated sap
The F. Thomas Parisian		
dyeing and cleaning w'ks.	Sacramento	Display of dyed and cleaned d
James A. Barwick	Sacramento	Draper's self-recording therm
H. H. Harlan	Venado	Display of mohair
H. H. Harlan	Venado	Display of mohair
Pacific Roll Paper Co.	San Francisco	Display of Hopkins' holders and
Pacific Roll Paper Co.	San Francisco	Pacific tree p
Pacific Paving Co.	San Francisco	Bituminous rock pav
Baker & Hamilton	Sacramento	Shotgun cartridges, machine
Coburn, Tevis & Co.	San Francisco	Axle
Coburn, Tevis & Co.	San Francisco	Har
Coburn, Tevis & Co.	San Francisco	Hyg
James A. Barwick	Sacramento	Hyg
Armes & Dallam	San Francisco	Prepared paint (pure g
Armes & Dallam	San Francisco	American graphite
Armes & Dallam	San Francisco	Empire step
Armes & Dallam	San Francisco	Self-wringing mop and
Armes & Dallam	San Francisco	Clean-sweep
Thomas Hildreth	Sacramento	Two silver-mounted
Thomas Hildreth	Sacramento	Mexican
W. H. Murray	San Francisco	Tooth
Mrs. C. A. Hull	Sacramento	and mouth wash, put up by M
Catton, Bell & Co.	San Francisco	Tortoise shell comb, 160 y
Pacific Water-closet Works	San Francisco	Little's patent sh
San Francisco Gaslight Co.	San Francisco	Pacific and Far West plug
Sac. Glass & Crockery Co.	Sacramento	Magic pocket lamp and cigar

FIFTH DEPARTMENT.

CLASS I—SILK, COTTON, AND TOBACCO.

EXHIBITOR.	Address.	Articles Exhibited.
Carlson-Currier Mfg. Co.	San Francisco	General
Carlson-Currier Mfg. Co.	San Francisco	display of silks, made in California.
Carlson-Currier Mfg. Co.	San Francisco	Display of thrown and twisted silk in the
Carlson-Currier Mfg. Co.	San Francisco	gum and boiled off, made in California.
Carlson-Currier Mfg. Co.	San Francisco	Display of
Carlson-Currier Mfg. Co.	San Francisco	machine spool silk, made in California.
Carlson-Currier Mfg. Co.	San Francisco	Display of
Carlson-Currier Mfg. Co.	San Francisco	of knitting silk, made in California.
Carlson-Currier Mfg. Co.	San Francisco	Display of
Carlson-Currier Mfg. Co.	San Francisco	spool embroidery, made in California.
Carlson-Currier Mfg. Co.	San Francisco	Display of
Carlson-Currier Mfg. Co.	San Francisco	skein embroidery, made in California.
H. Murray	San Francisco	California tobacco in leaf.
California Cotton Mills	East Oakland	Four hundred
B. Ewer	National City	pounds of cotton, raised in California.
ne & Connolly	San Francisco	Display of thrown and twisted
Lorillard	San Francisco	silk boiled off, made in California.
		Manufactured tobacco and cigars.
		Tobacco, Turtle brand.

CLASS II—FLOUR AND GRAIN.

EXHIBITOR.	Address.	Articles Exhibited.
Joseph McGregor	Perkins	Bale of California hops.
Charles Studarus	Routiers	Sack of Australian wheat.
Joseph Sims	Union House	Sample of Australian wheat.
Joseph Sims	Union House	Sample of barley.
Joseph Sims	Sacramento	Bale of California hops.
Joseph Sims	Union House	Sack of Australian wheat.
H. Jones	Colusa	Forty sheaves of grain.
H. Jones	Colusa	California club wheat.
H. Jones	Colusa	Royal Australian wheat.
H. Jones	Colusa	Snowflake wheat.
H. Jones	Colusa	Sonora wheat.
H. Jones	Colusa	Salt Lake club wheat.
H. Jones	Colusa	Stock barley.
H. Jones	Colusa	Small white club wheat.
H. Jones	Colusa	Proper wheat.
H. Jones	Colusa	Blue stem wheat.
H. Jones	Colusa	Large California club wheat.
H. Jones	Cusa	One sack of yellow corn.
W. Miller	Rohnerville	Sample of timothy.
W. Miller	Rohnerville	Sample of clover seed.
W. Miller	Rohnerville	Sample of mesquite grass.
W. Miller	Rohnerville	Sample of redtop seed.
W. Miller	Rohnerville	Sample of orchard grass seed.
H. Jones	Colusa	Sample of white family flour.
W. Oliver	Alton	One sack of oats.
George Muddox	Sacramento	One box of garden
B. Ewer	San Francisco	seeds, forty varieties, raised in California.
rr & Co.	San Francisco	Exhibit
rr & Co.	San Francisco	of garden seeds of California production.
S. Shaffer	Union House	Whitest sam
Reedey	Hydesville	ple of family flour made in California.
H. Murray	San Francisco	Bakers' flour.
H. Jones	Colusa	One sack of barley, California production.
rr & Co.	San Francisco	Sack of seed barley.
		Display of seeds from the Depart
		ment of Agriculture, Washington, D. C.
		One hundred pounds of bakers' flour.
		Flour, Starr brand.

FIFTH DEPARTMENT—Continued.

CLASS III—VEGETABLES, ROOTS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Chas. Studarus	Routiers	Six crookneck squashes
Isaac Lea	Florin	Display of licorice
M. Mento	Sacramento	Six Hubbard squashes
M. Mento	Sacramento	Twelve potatoes
M. Mento	Sacramento	Sack Centennial potatoes
M. Mento	Sacramento	Sack Early Rose potatoes
J. Hamilton	Sacramento	Cucumbers
J. Hamilton	Sacramento	Six turnips
J. Hamilton	Sacramento	Six crookneck squashes
P. H. Murphy	Perkins	Largest pumpkin
A. A. Krull	Sacramento	Five dozen Ross watermelons
A. A. Krull	Sacramento	Three dozen cantaloupes
F. Gabrielli	Sacramento	Sack red potatoes
F. Gabrielli	Sacramento	Sack white potatoes
F. Gabrielli	Sacramento	Greatest variety of Irish potatoes, sack of each
F. Gabrielli	Sacramento	Sack sweet potatoes
F. Gabrielli	Sacramento	Display of licorice
F. Gabrielli	Sacramento	Twelve parsnips
F. Gabrielli	Sacramento	Twelve carrots
F. Gabrielli	Sacramento	Six long blood beets
F. Gabrielli	Sacramento	Six turnips
F. Gabrielli	Sacramento	Six sugar beets
F. Gabrielli	Sacramento	Peck of turnips
F. Gabrielli	Sacramento	Six drumhead cabbages
F. Gabrielli	Sacramento	Six heads red Dutch cabbages
F. Gabrielli	Sacramento	Six heads of any other
F. Gabrielli	Sacramento	Three heads cauliflower
F. Gabrielli	Sacramento	Three heads brussels sprouts
F. Gabrielli	Sacramento	Six heads lettuce
F. Gabrielli	Sacramento	Half peck red potatoes
F. Gabrielli	Sacramento	Half peck yellow potatoes
F. Gabrielli	Sacramento	Half peck white potatoes
F. Gabrielli	Sacramento	Twelve roots
F. Gabrielli	Sacramento	Six stockings
F. Gabrielli	Sacramento	Three dozen ears sweet corn
F. Gabrielli	Sacramento	Three mountain sweet watermelons
F. Gabrielli	Sacramento	Three watermelons of any other
F. Gabrielli	Sacramento	Three cantaloupes
F. Gabrielli	Sacramento	Three muskmelons
F. Gabrielli	Sacramento	Six cucumbers
F. Gabrielli	Sacramento	Half peck lima beans
F. Gabrielli	Sacramento	Half peck white beans
F. Gabrielli	Sacramento	Half peck kidney beans
F. Gabrielli	Sacramento	Half peck pole beans
F. Gabrielli	Sacramento	Half peck field peas
F. Gabrielli	Sacramento	Half peck garden peas
F. Gabrielli	Sacramento	Half peck castor beans
F. Gabrielli	Sacramento	Greatest variety of beans
F. Gabrielli	Sacramento	Half peck gherkin cucumbers
F. Gabrielli	Sacramento	Three purple eggplants
F. Gabrielli	Sacramento	Table collection of vegetables
Chauncey Langdon	Rohnerville	Sack red potatoes
Chauncey Langdon	Rohnerville	Sack white potatoes
Chauncey Langdon	Rohnerville	Sack of any other
Chauncey Langdon	Rohnerville	Greatest variety of
Chauncey Langdon	Rohnerville	Twelve parsnips
Chauncey Langdon	Rohnerville	Twelve carrots
Chauncey Langdon	Rohnerville	Six turnips
Chauncey Langdon	Rohnerville	Six sugar beets
Chauncey Langdon	Rohnerville	Half peck lima beans
Chauncey Langdon	Rohnerville	Half peck white beans
Chauncey Langdon	Rohnerville	Half peck yellow beans
Chauncey Langdon	Rohnerville	Half bushel white beans
Chauncey Langdon	Rohnerville	Peck bush beans
Chauncey Langdon	Rohnerville	Peck garden peas
Chauncey Langdon	Rohnerville	Greatest variety of

FIFTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Amos Hansell & Sons	Camp Grant	Half peck peppers for pickling.
Cusa	Camp Grant	Peck of tomatoes.
P. Hansen	Alton	One sack field peas.
Albert Rogers	Riverside	Two boxes potatoes.
Colusa & Burkey	Colusa	Mountain sweet watermelons.
Colusa & Burkey	Colusa	Three watermelons of any kind.
Colusa & Burkey	Colusa	Six cucumbers.
Colusa & Burkey	Colusa	Twelve carrots.
Colusa & Burkey	Colusa	Twelve roots salsify.
Colusa & Burkey	Colusa	Peck red onions.
Colusa & Burkey	Colusa	Turnip beets.
Colusa & Burkey	Colusa	Three purple egg plants.
Colusa & Burkey	Colusa	Six sugar beets.
Colusa & Burkey	Colusa	Six cabbages of any variety.
Colusa & Burkey	Colusa	Twelve sweet corn, green.
Colusa & Burkey	Colusa	Six Hubbard squashes.
Colusa & Burkey	Colusa	Six marrow squashes.
Colusa & Burkey	Colusa	Three muskmelons.
Colusa & Burkey	Colusa	Twelve parsnips.
Colusa & Burkey	Colusa	Half peck peppers for pickling.
Colusa & Burkey	Colusa	Sack of sweet potatoes.
Colusa & Burkey	Colusa	Six long blood beets.
Colusa & Burkey	Colusa	One peck tomatoes.
Colusa & Burkey	Colusa	Three heads cauliflower.
Colusa & Burkey	Colusa	Six heads lettuce.
Colusa & Burkey	Colusa	Six stalks celery.
Colusa & Burkey	Colusa	Sack of red potatoes.
Colusa & Burkey	Colusa	Sack of white potatoes.
H. Murray	San Francisco	Six sugar beets.

CLASS IV—FLOWERS.

EXHIBITOR.	Address.	Articles Exhibited.
Ill Conservatory Co.	Sacramento	Collection of flowers in bloom.
Ill Conservatory Co.	Sacramento	Collection of ornamental foliage plants.
Ill Conservatory Co.	Sacramento	Display of cut flowers, to be kept fresh during exhibition by replacing.
Ill Conservatory Co.	Sacramento	Collection of new and rare plants.
Ill Conservatory Co.	Sacramento	Display of coleus, distinct varieties.
Ill Conservatory Co.	Sacramento	Varied exhibit of named varieties of dahlias.
Ill Conservatory Co.	Sacramento	Collection of fuchsias in bloom.
Ill Conservatory Co.	Sacramento	Collection of tuberoses.
Ill Conservatory Co.	Sacramento	Collection of pinks.
Ill Conservatory Co.	Sacramento	Collection of ferns.
Ill Conservatory Co.	Sacramento	Display of bouquets.
Ill Conservatory Co.	Sacramento	Collection of plants for greenhouse, conservatory, and window culture.
Ill Conservatory Co.	Sacramento	Display of hanging baskets containing plants.
A. Krull	Sacramento	Collection of natural flowers.
J. Groh	Blue Lakes	Collection of ferns.

CLASS V—CHEESE.

EXHIBITOR.	Address.	Articles Exhibited.
P. Verdie	Ferndale	Cheese one year old and over.
P. Verdie	Ferndale	Cheese under one year.
P. Verdie	Ferndale	Display of cheese.

FIFTH DEPARTMENT—Continued.

CLASS VI—BUTTER, BREAD, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Sadie Winn	Sacramento	Domestic wheat
Sadie Winn	Sacramento	Domestic graham
Henry Fisher & Co.	Sacramento	Pilot bread, manufactured by American Biscuit Co., San Francisco
Henry Fisher & Co.	Sacramento	Soda bread
Henry Fisher & Co.	Sacramento	Butter cracker
Henry Fisher & Co.	Sacramento	Sweet cracker
Henry Fisher & Co.	Sacramento	Boston cracker
Wm. Johnston	Courtland	Display of rolled bread
Ravenna, W. H. Murray, agent	San Francisco	Display of macaroni and vermicelli
Alton Creamery	Alton	Twenty rolls of bread
Humboldt Creamery	Humboldt County	Twenty rolls of bread
Mrs. H. Works	Sacramento	Soda bread
Mrs. Dr. Clayton	Sacramento	Domestic corn bread
Mrs. Dr. Clayton	Sacramento	Rye bread
Mrs. Dr. Clayton	Sacramento	Brown bread
Mrs. Dr. Clayton	Sacramento	Graham bread
Mrs. Dr. Clayton	Sacramento	Biscuit
Mrs. Dr. Clayton	Sacramento	Soda biscuit
Mrs. Dr. Clayton	Sacramento	Milk bread
Mrs. Dr. Clayton	Sacramento	Domestic bread
Mrs. Dr. Clayton	Sacramento	Twenty rolls of butter
Mrs. Dr. Clayton	Sacramento	Box of butter
Laura Lubin	Sacramento	Domestic wheat
Ruth Lubin	Sacramento	Domestic wheat
H. Murray	San Francisco	Domestic wheat
M. Kelly	Sacramento	Domestic corn
Miss A. Marshall	Sacramento	Steam brown
Miss A. Marshall	Sacramento	Wheat
Mrs. Geo. Muddox	Sacramento	Graham
Mrs. Geo. Muddox	Sacramento	Wheat
Mrs. Geo. Muddox	Sacramento	Potato
Mrs. C. E. Parker	Sacramento	Domestic wheat
Mrs. C. E. Parker	Sacramento	Local corn
Mrs. C. E. Parker	Sacramento	Soda
Mrs. C. E. Parker	Sacramento	Raised
Mrs. Sullivan	Sacramento	Domestic wheat
Mrs. Sullivan	Sacramento	Soda
Edna Johnston	Sacramento	Domestic wheat
Edna Johnston	Sacramento	Domestic wheat
Mrs. C. A. Hull	Union House	Domestic corn
Mrs. C. A. Hull	Union House	Domestic graham
Mrs. C. A. Hull	Union House	Domestic brown
Mrs. C. A. Hull	Union House	Domestic wheat
Mrs. C. A. Hull	Union House	Domestic soda
Mrs. C. A. Hull	Union House	Vienna
Mrs. A. M. Jackman	Perkins	Display of domestic
Mrs. A. M. Jackman	Perkins	Light
Mrs. A. M. Jackman	Perkins	Soda
Mrs. A. M. Jackman	Perkins	Corn
Mrs. A. M. Jackman	Perkins	Brown
Mrs. A. M. Jackman	Perkins	Wheat
Mrs. P. H. Murphy	Perkins	Light
Mrs. P. H. Murphy	Perkins	Soda
Mrs. P. H. Murphy	Perkins	Wheat
Mrs. P. H. Murphy	Perkins	Graham
Mrs. M. L. Bassett	Sacramento	Domestic corn
Mrs. M. L. Bassett	Sacramento	Domestic rye
Mrs. M. L. Bassett	Sacramento	Domestic brown
Mrs. M. L. Bassett	Sacramento	Domestic graham
Mrs. M. L. Bassett	Sacramento	Domestic wheat
Mrs. M. L. Bassett	Sacramento	Soda
Mrs. M. L. Bassett	Sacramento	Raised

FIFTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Mrs. M. L. Bassett	Sacramento	Display of bread
Mrs. S. J. Conrad	Sacramento	Domestic corn bread
Mrs. S. J. Conrad	Sacramento	Rye bread
Mrs. S. J. Conrad	Sacramento	Domestic wheat bread
Mrs. S. J. Conrad	Sacramento	Brown bread
Mrs. S. J. Conrad	Sacramento	Graham bread
Mrs. S. J. Conrad	Sacramento	Biscuit
Mrs. S. J. Conrad	Sacramento	Soda biscuit
Mrs. S. J. Conrad	Sacramento	Milk bread
Mrs. S. J. Conrad	Sacramento	Domestic bread
King	Clarksburg	Twenty rolls of butter
James Bloom	Petaluma	Box of butter

CLASS VII—SUGAR, CANDIES, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Fisher	Sacramento	Eight cases confectionery
Oynihan Bros.	Sacramento	Display of confectionery
Oynihan Bros.	Sacramento	Varieties of candies made in hall during exhibition
H. Murray	San Francisco	One hundred pounds sugar, made from sugar beets
H. Murray	San Francisco	One hundred pounds sugar, made from sugar cane
H. Murray	San Francisco	Five gallons syrup, made from either above named articles

CLASS VIII—MISCELLANEOUS.

EXHIBITOR.	Address.	Articles Exhibited.
Gleside Nursery Co.	Sacramento	Variety of fruit trees
Gleside Nursery Co.	Sacramento	Tragedy prune trees
Gleside Nursery Co.	Sacramento	Bartlett pear trees
Gleside Nursery Co.	Sacramento	French prune trees
Gleside Nursery Co.	Sacramento	Early Crawford peach trees
Gleside Nursery Co.	Sacramento	Peach plum trees
Monroe Condensed Milk Co.	San Francisco	Monroe brand of condensed milk
Tash	Sacramento	Bunch cayenne peppers
Tash	Sacramento	Bushel bayou beans
John Miller	Rohnerville	Sack Italian rye grass
John Miller	Rohnerville	Sack rib grass
P. Odibert	Sacramento	One box dried tomatoes
L. Merry	San Francisco	Lard (Royal brand)
B. Ewer	San Francisco	Syrup of figs
Wester Tryon	Sacramento	California cotton
Wester Tryon	Sacramento	Egyptian corn
Chr & Yoerk	Sacramento	Display of butchers' and packers' home products
Chr & Yoerk	Sacramento	Canned beef
Chr & Yoerk	Sacramento	English brain or head cheese
Chr & Yoerk	Sacramento	Bacon
Chr & Yoerk	Sacramento	Hams
Chr & Yoerk	Sacramento	Lards
Chr & Yoerk	Sacramento	Dried beef
H. Murray	San Francisco	Dr. Henley's IXL bitters and Tamarack
Aden Gate Distilling Co.	San Francisco	Compressed yeast
B. Ewer	San Francisco	Display of cocoons from thirty different counties in California, from Ladies Silk Culture, California
H. Murray	San Francisco	Display of ramie plants
H. Jones	Colusa	Sunset Mills roller-made flour
H. Jones	Colusa	Graham flour

FIFTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
T. B. Hall	Sacramento	Condensed
T. B. Hall	Sacramento	Condensed
P. Lorillard	San Francisco	Tobacco, Turtle

GOLD MEDAL.

EXHIBITOR.	Address.	Articles Exhibited.
Carlson-Currier Mfg. Co.	San Francisco	Display of silk made in Calif.
H. Fisher & Co.	Sacramento	Display of confection
Bell Conservatory Co.	Sacramento	Horticultural and floral
Moynihan Bros.	Sacramento	of confectionery made in Sacram
California Cotton Mills	East Oakland	of cotton of California manu
T. B. Hall	Sacramento	Condensed
T. B. Hall	Sacramento	Condensed

SIXTH DEPARTMENT.

CLASS I—GREEN FRUITS.

EXHIBITOR.	Address.	Articles Exhibited.
Joseph Sims	Union House	Display of green
Joseph Sims	Union House	White Adriatic
Joseph Sims	Union House	White Smyrna
Joseph Sims	Union House	Purple
J. L. Stubbs	Brighton	Display of Salway
J. L. Stubbs	Brighton	Display of Lemon Cling
J. L. Stubbs	Brighton	Display of seedling cling
J. L. Stubbs	Brighton	Display of Winter Nelis
E. B. Beecher	Auburn	Display of green
E. B. Beecher	Auburn	White Adriatic
E. B. Beecher	Auburn	Pacific White
E. B. Beecher	Auburn	Brown Turkey
E. B. Beecher	Auburn	Isch
E. B. Beecher	Auburn	Endri
E. B. Beecher	Auburn	California Mission
E. B. Beecher	Auburn	An unknown
J. L. Stubbs	Brighton	Ten pounds White Smyrna
Joe Tash	Sacramento	Gloria Mundi
Joe Tash	Sacramento	Bartlett
Amos Hansell & Sons	Camp Grant	Display of apples and
Amos Hansell & Sons	Camp Grant	Variety of both apples and
J. H. Smith	Camp Grant	Display of
G. W. Threlkel	Newcastle	McDevitt's Cling
G. W. Threlkel	Newcastle	Ward's Cling
G. W. Threlkel	Newcastle	George's Late
G. W. Threlkel	Newcastle	Salway
G. W. Threlkel	Newcastle	Orange Cling
G. W. Threlkel	Newcastle	Yellow Freestone seedling
G. W. Threlkel	Newcastle	White Freestone seedling
G. W. Threlkel	Newcastle	White Clingstone seedling
J. P. Odbert	Sacramento	Five varieties
J. P. Odbert	Sacramento	Three varieties

SIXTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
P. Odbert	Sacramento	French prunes.
P. Odbert	Sacramento	Three varieties figs.
P. Odbert	Sacramento	Two varieties quinces.
L. Hawk	Rocklin	Variety of pears.
L. Hawk	Rocklin	General display of pears.
eo. Perkins	Newcastle	Display of peaches.
eo. Perkins	Newcastle	Chile Cling peaches.
eo. Perkins	Newcastle	Orange Cling peaches.
eo. Perkins	Newcastle	McDevitt's Cling peaches.
eo. Perkins	Newcastle	George's Late peaches.
eo. Perkins	Newcastle	Brandywine Freestone peaches.
eo. Perkins	Newcastle	Salway peaches.
ob. Greer	Sacramento	Variety of peaches.
rs. E. Shields	Routiers	Two varieties peaches.
rs. E. Shields	Routiers	George's Late peaches.
rs. E. Shields	Routiers	Salway peaches.
ob. Greer	Sacramento	Three varieties figs.
ob. Greer	Sacramento	White Smyrna figs.
ob. Greer	Sacramento	Adriatic figs.
ob. Greer	Sacramento	Purple figs.
r. Manlove	Perkins	Purple figs.
r. Manlove	Perkins	White Smyrna figs.
r. Manlove	Perkins	Two plates Salway peaches.
r. Manlove	Perkins	One plate Silverskin prunes.
r. Manlove	Perkins	Two plates Winter Nelis pears.
A. Krull	Sacramento	One plate Japanese persimmons.
L. Stubbs	Sacramento	Freestone seedling peaches.
L. Stubbs	Sacramento	Tragedy prunes.
L. Stubbs	Sacramento	Winter Nelis pears.
L. Stubbs	Sacramento	Salway peaches.
saac Lea	Florin	Six green oranges and orange blossoms.
eo. Rich	Florin	Display of Sicily lemons.

CLASS II—HONEY, PRESERVES, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
rs. F. T. Robinson	Florin	Display of jellies and preserves.
rs. F. T. Robinson	Florin	Blackberry jelly.
rs. F. T. Robinson	Florin	Blue plum jelly.
rs. F. T. Robinson	Florin	Grape jelly.
rs. F. T. Robinson	Florin	Strawberry jelly.
rs. F. T. Robinson	Florin	Nectarine jelly.
rs. F. T. Robinson	Florin	Peach jelly.
rs. F. T. Robinson	Florin	Yellow plum jelly.
rs. F. T. Robinson	Florin	Ground cherry preserves.
rs. C. A. Hull	Union House	Six jars purple pickle figs.
rs. C. A. Hull	Union House	Six jars white pickle figs.
rs. J. P. Odbert	Sacramento	Display of fruit in glass.
rs. J. P. Odbert	Sacramento	Display of pickles.
rs. J. P. Odbert	Sacramento	Display of jams and jellies.
rs. J. P. Odbert	Sacramento	Six jars raspberry jelly.
rs. J. P. Odbert	Sacramento	Six jars red currant jelly.
rs. J. P. Odbert	Sacramento	Six jars black currant jelly.
rs. J. P. Odbert	Sacramento	Six jars blackberry jelly.
rs. J. P. Odbert	Sacramento	Six jars strawberry jelly.
rs. J. P. Odbert	Sacramento	Six jars quince jelly.
rs. J. P. Odbert	Sacramento	Six jars blackberry jam (seedless).
rs. J. P. Odbert	Sacramento	Six jars blackberry jam.
rs. J. P. Odbert	Sacramento	Six jars raspberry jam (seedless).
rs. J. P. Odbert	Sacramento	Six jars raspberry jam.
rs. J. P. Odbert	Sacramento	Special
saac Lea	Florin	jar of preserved orange cling peaches.
L. Hawk	Rocklin	One jar yellow pickled figs.
L. Hawk	Rocklin	Six jars red currant jelly.
L. Hawk	Rocklin	Six jars peach jelly.
L. Hawk	Rocklin	Six jars quince jelly.

SIXTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Geo. Muddox	Sacramento	Six jars raspberry
Geo. Muddox	Sacramento	Six jars strawberry
Geo. Muddox	Sacramento	Six jars red currant
Geo. Muddox	Sacramento	Six jars quince
Geo. Muddox	Sacramento	Six jars blackberry
Geo. Muddox	Sacramento	Six jars raspberry
Geo. Muddox	Sacramento	Display of jams and jellies in
Geo. Muddox	Sacramento	Ten pounds
C. Langdon	Rohnerville	Display of
C. Langdon	Rohnerville	Six jars raspberry
C. Langdon	Rohnerville	Six jars red currant
C. Langdon	Rohnerville	Six jars blackberry
C. Langdon	Rohnerville	Six jars strawberry
C. Langdon	Rohnerville	Six jars apple
C. Langdon	Rohnerville	Six jars crabapple

CLASS III—DRIED AND PRESERVED FRUITS, NUTS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
G. W. Delmater	Newcastle	White dried Adriatic
G. W. Delmater	Newcastle	Pared McDevitt pe
Isaac Lea	Florin	Display of che
E. J. Clanton	Woodland	Dried
E. J. Clanton	Woodland	Dried Royal ap
E. B. Beecher	Auburn	One box bleached Endrich
E. B. Beecher	Auburn	One box unbleached Endrich
J. L. Stubbs	Brighton	Dried le
Isaac Lea	Florin	One box white dried
Isaac Lea	Florin	One box yellow dried
Amos Hansell & Sons	Camp Grant	Ten pounds dried raspbe
J. P. Odbert	Sacramento	Ten pounds dried French p
J. P. Odbert	Sacramento	Ten pounds dried German p
J. P. Odbert	Sacramento	Ten pounds dried
J. P. Odbert	Sacramento	Ten pounds dried
J. P. Odbert	Sacramento	Display of almonds, hard
Robert Greer	Sacramento	Display of almonds, soft
Robert Greer	Sacramento	Ten pounds dried peaches by pro
Mrs. E. Shields	Routiers	Four kinds of p
Mrs. E. Shields	Routiers	Silverskin prunes, bla
Mrs. E. Shields	Routiers	Gros prunes, unblea
Mrs. E. Shields	Routiers	French prunes, unblea
Mrs. E. Shields	Routiers	French prunes, bla
Mrs. E. Shields	Routiers	Dried Crawford pe
Mrs. E. Shields	Routiers	Hard and soft-shell alu
Dr. Manlove	Perkins	Two plates eastern black w
Dr. Manlove	Perkins	Two plates eastern butte
Dr. Manlove	Perkins	One box French p
Dr. Manlove	Perkins	One box Silverskin p
Catton, Bell & Co.	San Francisco	Tre
Catton, Bell & Co.	San Francisco	destroying scale insects on fruit
W. B. Ewer	San Francisco	Morris' poultry
J. B. Griffin	Winters	Dried
J. B. Griffin	Winters	Dried pe
J. B. Griffin	Winters	Dried
J. B. Griffin	Winters	Dried ap

SIXTH DEPARTMENT—Continued.

CLASS IV—GRAPES AND RAISINS.

EXHIBITOR.	Address.	Articles Exhibited.
P. Onstott	Yuba City	Display of Thompson's Seedless grapes.
os. Sims	Union House	One gallon grape syrup.
os. Sims	Union House	Six varieties table grapes.
os. Sims	Union House	Six varieties Tokay grapes.
os. Sims	Union House	Six varieties Muscat grapes.
os. Sims	Union House	Six varieties Purple Damascus grapes.
os. Sims	Union House	Six varieties Black Hamburg grapes.
os. Sims	Union House	Six varieties Rose of Peru grapes.
os. Sims	Union House	Six varieties Red Traminer grapes.
os. Sims	Union House	Three varieties table grapes.
os. Sims	Union House	Three varieties Tokay grapes.
os. Sims	Union House	Three varieties Purple Damascus grapes.
os. Sims	Union House	Three varieties Rose of Peru grapes.
os. Sims	Union House	One variety table grapes.
os. Sims	Union House	One variety Tokay grapes.
os. Sims	Union House	Six varieties wine grapes.
os. Sims	Union House	Six varieties Cabernet Franc grapes.
os. Sims	Union House	Six varieties Petite Syrah grapes.
os. Sims	Union House	Six varieties Black Burgundy grapes.
os. Sims	Union House	Six varieties Trousseau grapes.
os. Sims	Union House	Six varieties Carignan grapes.
os. Sims	Union House	Six varieties Mataro grapes.
os. Sims	Union House	Three varieties wine grapes.
os. Sims	Union House	Three varieties Cabernet Franc grapes.
os. Sims	Union House	Three varieties Petite Syrah grapes.
os. Sims	Union House	Three varieties Black Burgundy grapes.
os. Sims	Union House	One variety wine grapes.
os. Sims	Union House	One variety Petit Bouschet grapes.
os. Sims	Union House	General display of grapes.
os. Sims	Woodland	General display of Muscatelle raisins.
J. Clanton	Perkins	Variety of table grapes.
H. Murphy	Perkins	Variety of Tokay grapes.
H. Murphy	Roseville	Three varieties table grapes.
James Harris	Roseville	Three varieties Muscat grapes.
James Harris	Roseville	Three varieties Hamburg grapes.
James Harris	Roseville	Three varieties Morocco grapes.
James Harris	Roseville	Variety of table grapes.
James Harris	Roseville	Variety of Tokay grapes.
M. Davis	Florin	Six varieties table grapes.
M. Davis	Florin	Six varieties Muscat grapes.
M. Davis	Florin	Six varieties Tokay grapes.
M. Davis	Florin	Six varieties Black Morocco grapes.
M. Davis	Florin	Six varieties Blue Malvoisie grapes.
M. Davis	Florin	Six varieties Rose of Peru grapes.
M. Davis	Florin	Six varieties Black Hamburg grapes.
P. Odbert	Sacramento	Six varieties table grapes.
P. Odbert	Sacramento	Six varieties Muscat grapes.
P. Odbert	Sacramento	Six varieties Tokay grapes.
P. Odbert	Sacramento	Six varieties Cornichon grapes.
P. Odbert	Sacramento	Six varieties Rose of Peru grapes.
P. Odbert	Sacramento	Black Hamburg grapes.
P. Odbert	Sacramento	Muscatine grapes.
P. Odbert	Sacramento	Three varieties table grapes.
P. Odbert	Sacramento	Three varieties Cornichon grapes.
P. Odbert	Sacramento	Three varieties White Nice grapes.
P. Odbert	Sacramento	Three varieties Isabella grapes.
P. Odbert	Sacramento	One variety table grapes.
P. Odbert	Sacramento	One variety Cornichon grapes.
P. Odbert	Sacramento	Ten pounds white Muscat grapes.
L. Hawk	Rocklin	Six varieties table grapes.
L. Hawk	Rocklin	General display of grapes by producer.
L. Hawk	Rocklin	One variety wine grapes.
obt. Greer	Sacramento	Six varieties table grapes.
obt. Greer	Sacramento	Six varieties Tokay grapes.
obt. Greer	Sacramento	Six varieties Black Prince grapes.
obt. Greer	Sacramento	Six varieties Muscat grapes.
obt. Greer	Sacramento	Six varieties Moore's grapes.
obt. Greer	Sacramento	Six varieties Rose of Peru grapes.

SIXTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
Robt. Greer	Sacramento	One variety table
Robt. Greer	Sacramento	One variety Tokay
Robt. Greer	Sacramento	Three varieties wine
Robt. Greer	Sacramento	Three varieties Black Spanish
Robt. Greer	Sacramento	Three varieties Shelich
Robt. Greer	Sacramento	Three varieties Rose of Peru
Robt. Greer	Sacramento	Three varieties table
Robt. Greer	Sacramento	Three varieties Tokay
Robt. Greer	Sacramento	Three varieties Black Prince
Robt. Greer	Sacramento	Three varieties Muscat
Robt. Greer	Sacramento	One variety wine
Robt. Greer	Sacramento	One variety Black Spanish
Dr. Manlove	Perkins	Display and variety of
Dr. Manlove	Perkins	Display of Tokay
Dr. Manlove	Perkins	Display of Muscat of Alexandria
Dr. Manlove	Perkins	Display of Canon Hall Muscat
Dr. Manlove	Perkins	Display of Black Hamburg
Dr. Manlove	Perkins	Display of Mission
Dr. Manlove	Perkins	Display of Purple Damascus
Dr. Manlove	Perkins	Display of Catawba
Dr. Manlove	Perkins	Display of Huasco
Dr. Manlove	Perkins	Display of Chasselas
Dr. Manlove	Perkins	Display of Gray Chasselas
Dr. Manlove	Perkins	Display of Royal Muscatine
Dr. Manlove	Perkins	Display of Cliffner
Dr. Manlove	Perkins	Display of Chasselas Fontainebleau
Dr. Manlove	Perkins	Display of Rose of Peru
Dr. Manlove	Perkins	Display of Black Prince
Dr. Manlove	Perkins	Display of Verdal
Dr. Manlove	Perkins	Display of White Nice
Dr. Manlove	Perkins	Display of Feher Szagos
Dr. Manlove	Perkins	Display of Zinfandel
Dr. Manlove	Perkins	Display of Burgundy
Dr. Manlove	Perkins	Display of Black Riesling
Dr. Manlove	Perkins	Display of Purple Clusters
Dr. Manlove	Perkins	Display of Petite Pinot
Dr. Manlove	Perkins	Display of Miller's Burgundy
Dr. Manlove	Perkins	Display of Madeline
Dr. Manlove	Perkins	Display of Blue Malvoisie
Dr. Manlove	Perkins	Display of Ferrara
Dr. Manlove	Perkins	Display of Cornichon
Dr. Manlove	Perkins	Display of Dutch Sweetwater
Dr. Manlove	Perkins	Display of Medoc
Dr. Manlove	Perkins	Display of Morocco
Dr. Manlove	Perkins	Display of Emperor
Dr. Manlove	Perkins	Two varieties table
Mrs. E. Shields	Routiers	Display of Tokay
Mrs. E. Shields	Routiers	One variety wine
Mrs. E. Shields	Routiers	Display of Zinfandel
J. Harris	Roseville	Six varieties table
J. Harris	Roseville	Six varieties Ferrara
J. Harris	Roseville	Six varieties Cornichon
J. Harris	Roseville	Six varieties Seedless Sultana
J. Harris	Roseville	Six varieties Malaga
J. Harris	Roseville	Six varieties Catawba
J. Harris	Roseville	Six varieties Rose of Peru
J. Harris	Roseville	General display of grapes by pro

CLASS V—BRANDIES AND WINES.

EXHIBITOR.	Address.	Articles Exhibited.
H. W. Crabb	Oakville	Display of California brandies and
H. W. Crabb	Oakville	Grape brandy, three years old
H. W. Crabb	Oakville	Grape brandy
H. W. Crabb	Oakville	Grape brandy

SIXTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
W. Crabb	Oakville	White wine, two years old or over.
W. Crabb	Oakville	Gutedel of 1886.
W. Crabb	Oakville	Sauterne of 1886.
W. Crabb	Oakville	Riesling of 1886.
W. Crabb	Oakville	Chablis of 1886.
W. Crabb	Oakville	Gutedel of 1887.
W. Crabb	Oakville	Riesling of 1887.
W. Crabb	Oakville	Riesling of 1889.
W. Crabb	Oakville	Johannisberg Riesling of 1886.
W. Crabb	Oakville	Claret wines, three years old or over.
W. Crabb	Oakville	Mountain Zinfandel.
W. Crabb	Oakville	Beclan of 1886.
W. Crabb	Oakville	La Grande.
W. Crabb	Oakville	Cabernet.
W. Crabb	Oakville	Burgundy.
W. Crabb	Oakville	Cabernet.
W. Crabb	Oakville	Claret wine, two years old.
W. Crabb	Oakville	Zinfandel.
W. Crabb	Oakville	Nebbiolo.
W. Crabb	Oakville	Duriff.
W. Crabb	Oakville	Lagrine.
W. Crabb	Oakville	St. Laurent.
W. Crabb	Oakville	Petite Syrah.
W. Crabb	Oakville	Valdepenas.
W. Crabb	Oakville	Claret wine, one year old.
W. Crabb	Oakville	Sweet wine, one year old.
W. Crabb	Oakville	Haut Sauterne of 1886.
W. Crabb	Oakville	Haut Sauterne of 1887.
W. Crabb	Oakville	Malaga of 1885.
W. Crabb	Oakville	Madeira of 1885.
W. Crabb	Oakville	Angelica of 1885.
W. Crabb	Oakville	Muscadel of 1886.
W. Crabb	Oakville	Tokay of 1886.
W. Crabb	Oakville	Special wines.
W. Crabb	Oakville	Port of 1886.
W. Crabb	Oakville	Port of 1888.
W. Crabb	Oakville	Port of 1887.
W. Crabb	Oakville	California sherry, two years old or over.
W. Crabb	Oakville	Sherry of 1887.
W. Crabb	Oakville	Sherry of 1888.
Pink's widow	San Francisco	California champagne.
Charles A. Wetmore	San Francisco	Chateau Yquena of 1886.
Charles A. Wetmore	San Francisco	Haut Sauterne of 1887.
Charles A. Wetmore	San Francisco	Sauterne Souvenir of 1886.
Charles A. Wetmore	San Francisco	Medoc Souvenir of —.
Charles A. Wetmore	San Francisco	Cote D'or Souvenir.
Charles A. Wetmore	San Francisco	Table D'Hote.
Charles A. Wetmore	San Francisco	Souvenir of 1886.
Charles A. Wetmore	San Francisco	Marquex of 1887.
Charles A. Wetmore	San Francisco	Cognac of 1886.

CLASS VI—BEER.

EXHIBITOR.	Address.	Articles Exhibited.
Halo Brewing Co.	Sacramento	Lager beer.
Halo Brewing Co.	Sacramento	Export beer.
F. Brewery (limited)	San Francisco	Lager beer.
F. Brewery (limited)	San Francisco	Export beer.

SIXTH DEPARTMENT—Continued.
CLASS VII—MISCELLANEOUS.

EXHIBITOR.	Address.	Articles Exhibited.
H. W. Crabb	Oakville	Blackberry cordial brandy
H. W. Crabb	Oakville	Blackberry cordial brandy
H. W. Crabb	Oakville	Extra port wine, 14 years old,
Mt. Shasta Min. Spring Co.		One case mineral
Mt. Shasta Min. Spring Co.		One case sarsaparilla and
Mt. Shasta Min. Spring Co.		One case ginger
Isaac Lea	Florin	Branch Japanese persim
Isaac Lea	Florin	Mission Piccoline
Isaac Lea	Florin	Special hard-shell alm
Isaac Lea	Florin	Special soft-shell alm
Isaac Lea	Florin	Special paper-shell alm
Isaac Lea	Florin	One branch pomegr
Joseph Sims	Union House	Display of pomegr
J. L. Stubbs	Brighton	Mammoth g
Mrs. E. Robertson	Auburn	Six bottles oil
J. L. Stubbs	Brighton	Laughton black
Joseph Tash	Sacramento	Orange
Joseph Tash	Sacramento	Evergreen black
M. Mento	Sacramento	Portague
M. Mento	Sacramento	Yellow
J. Hamilton	Sacramento	Pomegr
J. Hamilton	Sacramento	Japanese persim
J. Hamilton	Sacramento	
Isaac Lea	Florin	Six bottles oil
Mrs. E. Robertson	Auburn	Six bottles oil
A. A. Krull	Sacramento	Seven kinds
A. A. Krull	Sacramento	Natural
Joseph Tash	Sacramento	Evergreen n
George Perkins	Newcastle	Exhibit of g
George Perkins	Newcastle	Exhibit of persim
W. Wilcox	Sacramento	Display of g
Mrs. J. P. Odbert	Sacramento	Five bottles blackberry
Mrs. J. P. Odbert	Sacramento	One bottle peach
Mrs. J. P. Odbert	Sacramento	One bottle cherry
Mrs. J. P. Odbert	Sacramento	Three bottles
Mrs. J. P. Odbert	Sacramento	Two bottles special
Mrs. J. P. Odbert	Sacramento	Four jars fig mar
Geo. Muddox	Sacramento	
Geo. Muddox	Sacramento	four bottles berry and vegetable
Geo. Muddox	Sacramento	Vegetables in gla
Geo. Muddox	Sacramento	Worcestershire
Geo. Muddox	Sacramento	
Geo. Muddox	Sacramento	Eleven glasses peach
Geo. Muddox	Sacramento	Nine jars gooseberry
Geo. Muddox	Sacramento	Six jars peach
Geo. Muddox	Sacramento	Six jars Silverskin em
Geo. Muddox	Sacramento	Six jars cranberry
Geo. Muddox	Sacramento	Six jars black grape
Geo. Muddox	Sacramento	Seven jars orange
Geo. Muddox	Sacramento	Six jars Muscat grape
Geo. Muddox	Sacramento	Six jars black cherry
Geo. Muddox	Sacramento	Six jars strawber
Geo. Muddox	Sacramento	Six jars app
Geo. Muddox	Sacramento	Nine jars
Geo. Muddox	Sacramento	Ten jars pineapple
Geo. Muddox	Sacramento	Ten jars lemon
Dr. Manlove	Perkins	Two plates
L. E. McMahan & Sons	Bartlett Springs	Bartlett min
W. B. Ewer	San Francisco	
J. L. Stubbs	Sacramento	
Coburn	San Francisco	Sparkling Golden Rus
Coburn	San Francisco	Carbonated swe
W. H. Jones	Colusa	Display of honey
W. H. Jones	Colusa	
W. H. Jones	Colusa	Display of hon
W. H. Jones	Colusa	Display of canned fr
Coburn, Tevis & Co.	San Francisco	
S. Martinell	Watsonville	
Chauncey Langdon	Rohnerville	Greatest varieties of bea

GOLD MEDAL.

EXHIBITOR.	Address.	Articles Exhibited.
H. Murray	San Francisco	General display.

SEVENTH DEPARTMENT.

CLASS I—OIL PAINTINGS, WATER COLORS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Idie L. Ballou	San Francisco	Thirteen oil paintings.
ss M. K. Irving	Colfax	Ten oil paintings.
ss Leonora Lies	San Francisco	One oil painting.
B. Maxfield	San Francisco	Twenty
		oil paintings, water colors, and pastels.
rs. H. C. Briggs	Sacramento	Thirteen oil paintings and water colors.
Strans	San Francisco	Sixteen oil paintings.
William Keith	San Francisco	Four oil paintings.
A. Coulter	San Francisco	Three oil paintings.
orton Bush	San Francisco	Thirteen oil paintings.
ie Lash	San Francisco	Nine oil paintings.
D. Yelland	San Francisco	Two oil paintings.
Andrew P. Hill	San José	Four oil paintings.
Duesbury	San Francisco	Three oil paintings.
P. Cook	San Francisco	One oil painting.
M. Brookes	San Francisco	Five oil paintings.
anda Austin	Sacramento	Thirteen oil paintings and crayons.
Roethe	San Francisco	Four oil paintings and pastels.
ce B. Chittendon	San Francisco	One oil painting.
omas Hill	San Francisco	One oil painting.
L. Heath	Santa Cruz	Eight oil paintings.
Kunath	San Francisco	Six oil paintings and pastels.
M. Farnum	Oakland	One oil painting and one water color.
Narjot	San Francisco	Three oil paintings.
ss Eva Withrow	San Francisco	Five oil paintings.
H. Boynton	Chico	Two oil paintings.
J. Adams	Sacramento	One oil painting and one crayon.
ly Bailey	San Francisco	One oil painting.
A. Geo. D. Stewart	Sacramento	Fifteen oil paint-
		ings, water colors, and crayon drawings.
an Sroufe	San Francisco	Eleven water colors and oil paintings.
go Fisher	San Francisco	Three water colors.
B. Gamble	San Francisco	One pastel painting.
orge Boedewig	San Francisco	Eight pastel and water colors.
F. Coleman	Napa	Four water colors.
nley Inchbold	San Francisco	Nineteen oil paintings.
ris. Jorgensen	San Francisco	Fifteen water colors.
Bella Sola	San Francisco	Eight
		oil paintings, water colors, and pastels.
AMATEURS.		
ss Neva Young	Sacramento	Two oil paintings.
ss L. M. Carpenter	San Francisco	Five oil paintings.
akahashi	San Francisco	Eight oil paintings and water colors.
J. W. Johnson	Sacramento	Four oil paintings.
M. Estes	Sacramento	Three oil paintings.
E. Rea	Sonoma	One oil painting.
ss F. McClatchy	Sacramento	Four water colors.
Fröelich	San Francisco	Six oil paintings.
al Memagoena	San Francisco	Five oil paintings and crayon drawings.
W. Wadsworth	Sacramento	Two oil paintings.
ss Jones	San Francisco	Eight oil paintings and water colors.
V. Davis	San Francisco	Two crayons.

SEVENTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.
C. S. Newell	Berkeley .....	..... Six water
Evangeline Ballou	San Francisco .....	..... Six oils and water
Stella M. Stewart	Sacramento .....	..... Seven oils, water colors, and
L. F. Reeves	Ukiah .....	..... One oil painting
Mrs. Kendall	Humboldt .....	..... and six paintings on California
		..... Two portfolios of water-color sketches

CLASS II—PHOTOGRAPHS.

EXHIBITOR.	Address.	Articles Exhibited.
I. W. Taber	San Francisco .....	..... Photographs
Geo. W. Stewart	Sacramento .....	..... Display of landscape photographs
A. O. Gregory	Sacramento .....	..... Display of photographic prints
C. J. Adams	Sacramento .....	..... Exhibition of solar work, retouched
E. W. Melvin	Sacramento .....	..... finished in crayon, oil, and water
C. W. Watkins	San Francisco .....	..... of solar prints, retouched in water
		..... ors, oil, crayon, India ink, and
		..... Display of solar work retouched

CLASS III—ETCHINGS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Sac. Business College	Sacramento .....	..... Two pen drawings
L. Roethe	San Francisco .....	..... Twenty-four pencil drawings
M. Cashman	San Francisco .....	..... Twelve pencil drawings
J. Macilroy	San Francisco .....	..... Six pencil drawings
L. Lies	San Francisco .....	..... Ten pen and ink drawings
Mrs. R. V. Davis	San Francisco .....	..... Three frames pencil drawings

CLASS IV—STATUARY, ETC.

EXHIBITOR.	Address.	Articles Exhibited.
Carlaw Bros.	Sacramento .....	..... One granite statue
Carlaw Bros.	Sacramento .....	..... Four marble statues
F. Flohr	San Francisco .....	..... Eight busts and medals
F. Happersberger	San Francisco .....	..... Six pieces statuary
C. S. Newell	Berkeley .....	..... Two pieces statuary

CLASS V—PENMANSHIP.

EXHIBITOR.	Address.	Articles Exhibited.
Bainbridge Busin's College	Sacramento .....	..... Display of penmanship
Sac. Business College	Sacramento .....	..... Display of plain and ornate
C. E. Webber	Sacramento .....	..... penmanship, entry for silver
		..... penmanship, entry for best specimen

SEVENTH DEPARTMENT—Continued.

CLASS VI—JUVENILE.

EXHIBITOR.	Address.	Articles Exhibited.
Warren E. Murray	San Francisco .....	..... Drawing by a minor
San Francisco Primary Schools	Sacramento .....	..... Display of primary work
Alton Davis	San Francisco .....	..... One map drawing
Stella Stewart	Sacramento .....	..... One map drawing

CLASS VII—CALIFORNIA DRAWINGS AND DESIGNS.

EXHIBITOR.	Address.	Articles Exhibited.
Warren E. Murray	San Francisco .....	..... Original design of an engine or
		..... machinery of any kind, accompanied by
		..... complete detail working drawings from
		..... which the same might be constructed.
Warren E. Murray	San Francisco .....	..... Mechanical and freehand drawing.
Van Der Naillen	San Francisco .....	..... Display
		..... of mechanical freehand penmanship
		..... or drawing of any kind or character,
		..... by any class in any school of design.
Union Iron Works	San Francisco .....	..... Mechanical drawing of any kind.
Happersberger	San Francisco .....	..... Designs for the proposed Lick
		..... Monument, also drawings of groups
		..... and reliefs for the Lick Monument.
St. Morrison's Class of '90	San Francisco .....	..... Map of California, enlarged and
Valencia Grammar School	San Francisco .....	..... colored; also two mechanical drawings.
St. Grammar School	Sacramento .....	..... Display of drawings.
J. Fox	Sacramento .....	..... Plans and designs of a city residence.

EIGHTH DEPARTMENT.

COUNTY EXHIBITS.

EXHIBITOR.	Address.	Articles Exhibited.
Bert Cosner	Colusa County .....	..... Colusa County exhibit.
A. Krull	Sacramento .....	..... Sacramento County exhibit.
Aluney Langdon	Humboldt .....	..... Humboldt County exhibit.
M. Lee	Yolo .....	..... Yolo County exhibit.
B. Ewer & W. H. Murray .....		..... Life members represent-
		..... ing the San Francisco "Journal of Com-
		..... merce," make a special display of Califor-
		..... nia products from San Francisco County.

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
CLASS I—THOROUGHBRED HORSES.				
<i>Stallions.</i>				
Best four years old and over.....	W. B. Todhunter.....	Sacramento.....	Prince of Norfolk.....	\$40 00
Second best.....	W. G. Ross.....	San Francisco.....	Cheviot (imp.).....	20 00
Best three years old.....	Leland Stanford.....	San Francisco.....	Flambeau.....	15 00
Best two years old.....	W. M. Murry.....	Sacramento.....	Power.....	20 00
Second best.....	W. M. Murry.....	Sacramento.....	Aristocrat.....	10 00
Best one year old.....	W. M. Murry.....	Sacramento.....	Laurelwood.....	15 00
Second best.....	W. L. Appleby.....	Santa Clara.....	Golden Eagle.....	7 50
Best under one year.....	C. Halverson.....	Routiers.....	Golden Eagle.....	10 00
Second best.....	W. F. Smith.....	Sacramento.....	Golden Eagle.....	5 00
<i>Mares.</i>				
Best four years old and over, with suckling colt.....	C. Halverson.....	Routiers.....	Maggie S and colt.....	40 00
Second best.....	Mrs. Alice Cutler.....	Sacramento.....	Nellie Fashion and colt.....	20 00
Best four years old and over.....	C. Halverson.....	Routiers.....	Isabella.....	30 00
Second best.....	W. F. Smith.....	Sacramento.....	Annie Laurie.....	15 00
Best three years old.....	L. J. Rose.....	San Gabriel.....	Minuet.....	25 00
Second best.....	C. Halverson.....	Routiers.....	Fabiola.....	12 50
Best two years old.....	L. J. Rose.....	San Gabriel.....	Blondinette.....	15 00
Second best.....	L. J. Rose.....	San Gabriel.....	Blondinette.....	7 50
Best one year old.....	W. F. Smith.....	Sacramento.....	Blondinette.....	10 00
Second best.....	L. J. Rose.....	San Gabriel.....	Blondinette.....	5 00
<i>Families.</i>				
Best thoroughbred dam with not less than two of her colts.....	C. Halverson.....	Routiers.....	Maggie S and two colts.....	37 50
Best stallion over two years old and over.....	Placenton Stock Farm.....	Placenton.....	Director and eight colts.....	100 00
<i>Stallions.</i>				
Best four years old and over.....	La Siesta Ranch.....	Menlo Park.....	Eros.....	40 00
Second best.....	J. W. Martin.....	Woodland.....	Clay Duke.....	20 00
Best three years old.....	F. F. Lowell.....	Sacramento.....	Palrose.....	30 00
Second best.....	Dr. Hicks.....	Sacramento.....	Proofreader.....	15 00
Best one year old.....	La Siesta Ranch.....	Menlo Park.....	Sausalito.....	15 00
Second best.....	W. F. Smith.....	Sacramento.....	Rebir.....	7 50
Best suckling colt.....	W. F. Smith.....	Sacramento.....	Barabbas.....	5 00
Best gelding.....	La Siesta Ranch.....	Menlo Park.....	Daylight.....	20 00
<i>Mares.</i>				
Best four years old and over, with suckling colt.....	La Siesta Ranch.....	Menlo Park.....	Oleta and colt.....	40 00
Second best.....	W. F. Smith.....	Sacramento.....	Pansy and colt.....	20 00
Best four years old and over.....	La Siesta Ranch.....	Menlo Park.....	Marquita.....	30 00
Second best.....	E. Topham.....	Milpitas.....	Lady Nutwood.....	15 00
Best three years old.....	La Siesta Ranch.....	Menlo Park.....	Sylvia.....	15 00
Best one year old.....	W. F. Smith.....	Sacramento.....	Lucy.....	10 00
Second best.....	W. F. Smith.....	Sacramento.....	Remora.....	5 00
Best suckling colt.....	J. P. Callendine.....	Sacramento.....	Abaca Wilkes.....	5 00
CLASS III—ROADSTERS.				
<i>Stallions.</i>				
Best four years old and over.....	C. H. Corsaw.....	Lodi.....	Somerset Prince.....	40 00
Second best.....	J. R. Jacobs.....	Knights Landing.....	Comet.....	20 00
Best three years old.....	Matt. Storn.....	Sacramento.....	Belvidere.....	30 00
Best two years old.....	J. B. Ramsey.....	Meridian.....	Willard Wilkes.....	20 00
Second best.....	W. F. Smith.....	Sacramento.....	Sid.....	10 00
Best one year old.....	J. A. McCloud.....	Stockton.....	Wood Vernon.....	15 00
Second best.....	E. Pickett.....	Elk Grove.....	Hickory Nut.....	7 50
Best under one year.....	B. E. Harris.....	San Francisco.....	Douglas.....	10 00
Second best.....	R. McEnespy.....	Chico.....	Chico.....	5 00
<i>Geldings.</i>				
Best gelding.....	Geo. McMullen.....	Sacramento.....	Little Phil.....	40 00
Second best.....	Willard Gardner.....	Sacramento.....	Dexter.....	20 00
<i>Mares.</i>				
Best four years old and over, with suckling colt.....	B. E. Harris.....	San Francisco.....	Lena Bowles and colt.....	40 00
Second best.....	A. D. Miller.....	Walsh Station.....	Juno and colt.....	20 00
Best four years old and over.....	W. J. Irvine.....	Sacramento.....	Belle Patchen.....	30 00
Second best.....	Miss Nellie J. Ryan.....	Sacramento.....	Maid of Killarney.....	15 00
Best three years old.....	W. F. Smith.....	Sacramento.....	Marina.....	30 00

TRANSACTIONS OF THE

STATE AGRICULTURAL SOCIETY.

FIRST DEPARTMENT—Continued.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
Second best.....	T. C. Snider.....	Sacramento.	Adelia.....	\$15 00
Best two years old.....	J. A. McCloud.....	Stockton.....	Daisy Vernon.....	20 00
Second best.....	J. A. McCloud.....	Stockton.....	Hattie Vernon.....	10 00
Best one year old.....	B. E. Harris.....	San Francisco.....	Sidena.....	5 00
Second best.....	T. C. Perkins.....	Perkins.....	Rose.....	5 00
Best suckling colt.....	H. S. Beals.....	Sacramento.....		
CLASS IV—CLEVELAND BAYS AND FRENCH COACH HORSES.				
Stallions.				
Best four years old and over.....	W. J. Prather.....	Fresno.....	Lord Hartington.....	20 00
Best three years old.....	Wm. Wilkinson.....	Fresno.....	Loyalty.....	30 00
Second best.....	W. J. Prather.....	Fresno.....	Scampton Swell.....	15 00
Mares.				
Best four years old and over, with colt.....	W. J. Prather.....	Fresno.....	Roseleaf and colt.....	20 00
Best four years old and over.....	Wm. Wilkinson.....	Fresno.....	Queenie.....	30 00
Second best.....	W. J. Prather.....	Fresno.....	Phantom.....	15 00
Best three years old.....	W. J. Prather.....	Fresno.....	Bellington Lassie.....	15 00
CLASS V—CARRIAGE TEAMS.				
Best.....	James McNasser.....	Sacramento.....		75 00
Second best.....	E. M. Leitch.....	Sacramento.....		40 00
CLASS VI—ROADSTER TEAMS.				
Best.....	T. H. Bernard.....	Chico.....	Kathleen and Fashion.....	50 00
Second best.....	A. L. Nichols.....	Sacramento.....	Addie B and Standard N.....	30 00
CLASS VII—HORSES OF ALL WORK.				
Stallions.				
Best four years old and over.....	C. Kinkaid.....	Davisville.....	C. Patchen.....	40 00
Second best.....	W. Ober.....	Sacramento.....	Davy Crockett.....	20 00
Best three years old.....	Jos. Heintz.....	Sacramento.....	Becky.....	30 00
Best one year old.....	B. E. Harris.....	San Francisco.....	King's Shield.....	15 00
Second best.....	Geo. Lassner.....	Freeport.....	Donald Clark.....	5 00
Mares.				
Best four years old and over, with colt.....	B. M. Loeveloy.....	Brighton.....	Flora and colt.....	40 00
Second best.....	H. H. Wilson.....	Rocklin.....	Colley and colt.....	20 00
Best four years old and over.....	A. D. Miller.....	Walsh Station.....	Luella.....	30 00
Second best.....	W. M. McIntosh.....	Roseville.....	Daisy.....	15 00
Best three years old.....	A. D. Miller.....	Walsh Station.....	Nellie.....	20 00
Second best.....	H. H. Wilson.....	Rocklin.....	Nell.....	10 00
Best two years old.....	J. A. McCloud.....	Stockton.....	Alice Vernon.....	15 00
Second best.....	C. B. Harris.....	Nicolaus.....	Lucy.....	7 50
Best one year old.....	Geo. Lassner.....	Freeport.....	Ella B.....	10 00
Second best.....	Geo. Lassner.....	Freeport.....	Orphan Girl.....	5 00
Best suckling colt.....	Voorhies & Barney.....	Sutter Creek.....	Bessie.....	10 00
Second best.....	H. H. Wilson.....	Rocklin.....	Flora.....	5 00
CLASS VIII—DRAFT HORSES—NORMANS.				
Stallions.				
Best four years old and over.....	J. P. Rodehaver.....	Petaluma.....	Beaufort.....	40 00
Second best.....	W. Wright.....	Davisville.....	Deschamps.....	20 00
CLASS IX—PERCHERONS.				
Stallions.				
Best four years old and over.....	Voorhies & Barney.....	Sutter Creek.....	Utile.....	40 00
Second best.....	Geo. McElroy.....	Arbuckle.....	Cing Mars.....	20 00
Best three years old.....	J. C. Smith.....	Oakland.....	Oregon.....	20 00
Best two years old.....	J. C. Smith.....	Oakland.....	Magnet.....	15 00
Best one year old.....	Voorhies & Barney.....	Sutter Creek.....	Harrison.....	10 00
Best under one year.....	Voorhies & Barney.....	Sutter Creek.....	Prince A.....	7 50
Mares.				
Best four years old and over, with colt.....	Voorhies & Barney.....	Sutter Creek.....	Perinette.....	20 00
Best four years old and over.....	J. C. Smith.....	Oakland.....	Laura.....	30 00
Second best.....	J. C. Smith.....	Oakland.....	Theresa.....	15 00
Best one year old.....	J. C. Smith.....	Oakland.....	Maud.....	5 00
Best suckling colt.....	Voorhies & Barney.....	Sutter Creek.....	Princess A.....	5 00
CLASS X—CLYDESDALES.				
Stallions.				
Best four years old and over.....	John Coakley.....	Irvington.....	Prince.....	40 00
Second best.....	C. W. Bennett.....	Wheatland.....	Black Champion.....	20 00

FIRST DEPARTMENT—Continued.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
Best three years old	Stoddard & De Gomez	Auburn	Douglas Dale	\$15 00
Best two years old	John Coakley	Irvington	Plunger	10 00
Best under one year	T. A. Nuter	Concord	Clyde Boy	10 00
Second best	C. W. Bennett	Wheatland	Annendale	5 00
<i>Mares.</i>				
Best four years old and over	Henry Pierce	San Francisco	Queen	15 00
Best under one year	C. W. Bennett	Wheatland	Adelaide	5 00
CLASS XI—DRAFT HORSES, OTHER THAN NORMANS, PERCHERONS, OR CLYDESDALES.				
<i>Stallions.</i>				
Best four years old and over	T. Ross	Sacramento	Emperor	40 00
Second best	R. G. McKenzie	Nicolaus	Earl of Derby	20 00
Best three years old	Henry Ehrhardt	Franklin	Franklin	30 00
Second best	R. J. Merkle	Sacramento	Barney	15 00
Best two years old	Parsons & Griffith	Geyserville	Lothair 4th	20 00
Second best	Geo. McElroy	Arbuckle	Prince	10 00
Best one year old	Parsons & Griffith	Geyserville	California Tom	7 50
Best under one year	W. J. Frather	Fresno	Blainey	5 00
<i>Mares.</i>				
Best four years old and over, with colt	Parsons & Griffith	Geyserville	Lady B and colt	20 00
Best four years old and over	R. J. Merkle	Sacramento	Fanchon	30 00
Second best	Parsons & Griffith	Geyserville	Langtry	15 00
Best three years old	R. J. Merkle	Sacramento	Black Bess	25 00
Second best	F. W. Midgley	Carbondale	Perch	12 50
Best two years old	R. J. Merkle	Sacramento	Queen	15 00
Second best	C. B. Harris	Nicolaus	Estred	7 50
Best one year old	R. J. Merkle	Sacramento	Mollie	10 00
Second best	F. W. Midgley	Carbondale	Mollie	5 00
WALKING MATCH.				
Best	Wm. McIntosh	Roseville	General	40 00
Second best	W. J. Frather	Fresno	Hlers	25 00
Best stallion of any age	W. F. Smith	Sacramento	Kebr.	180 00
Best mare of any age	B. E. Harris	San Francisco	Sidena	140 00
CLASS XIV—JACKS AND JENNIES.				
Best jack four years old and over	Charles Studarus	Routiers	Black Jeff	40 00
Second best	J. D. Rosenberger	Sites	Bob Ingersoll	20 00
Best three years old	E. S. Driver	Antelope	Longfellow	15 00
Best one year old	T. H. Harlan	Williams	Moses	15 00
Best jenny four years old and over	Charles Studarus	Routiers	Laura	15 00
Best one year old	Charles Studarus	Routiers	Belle	5 00
<i>Mules.</i>				
Best matched span, three years old and over, California bred	George Smith	Nicolaus	Pat and Nell	40 00
Second best	H. W. Jeans	Blocksburg	Sally and Beck	20 00
Best one year old	Charles Studarus	Routiers	Barney	10 00
Best suckling	Charles Studarus	Routiers		15 00

CATTLE.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
CLASS I—DUREHAMS.				
<i>Bulls.</i>				
Best three years old and over	Heilbron Bros.	Sacramento	28th Grand Duke of Gloster	\$40 00
Second best	C. Younger & Son	San José	28th Kirklevington of F. H.	20 00
Best two years old	C. Younger & Son	San José	44th Kirklevington of F. H.	30 00
Second best	James Jones	Pleasant Grove	Cavalier	15 00
Best one year old	P. Peterson	Sites	Manunga Duke	20 00
Second best	Heilbron Bros.	Sacramento	2d Duke of Wildflower	10 00
Best calf	Heilbron Bros.	Sacramento	3d Duke of Wildflower	15 00
Second best	P. H. Murphy	Brighton	California Chief	7 50
<i>Cows.</i>				
Best three years old and over	C. Younger & Son	San José	21st Rose of Forest Home	40 00
Second best	P. S. Childs	Davisville	Hattie	20 00
Best two years old	C. Younger & Son	San José	Bonnie Belle 6th	30 00
Second best	P. Peterson	Sites	3d Rosaly K.	15 00

FIRST DEPARTMENT—Continued.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
Best one year old.....	Heilbron Bros.	Sacramento	Duchess of Wildflower.....	\$20 00
Second best.....	C. Younger & Son.	San José	Jessie Maynard 6th.....	10 00
Best calf.....	P. H. Murphy	Brighton	Lady Alice.....	15 00
Second best.....	Heilbron Bros.	Sacramento	5th Duchess of Aberdeen.....	7 50
<i>Herd.</i>				
Best over two years old.....	C. Younger & Son.	San José	28th Kirklevington and four cows.....	80 00
Best under two years old.....	Heilbron Bros.	Sacramento	2d Duke of Wildflower, four cows.....	80 00
<i>Sweepstakes.</i>				
Best bull of any age.....	Heilbron Bros.	Sacramento	28th Grand Duke of Gloster.....	70 00
Best cow of any age.....	P. S. Childs.	Davisville.	Hattie.....	70 00
<i>CLASS II—JERSEYS.</i>				
<i>Bulls.</i>				
Best three years old and over.....	W. C. Smith.	Florin	King of Y. B.....	40 00
Second best.....	S. A. Haxby	Alameda	Duke of Alameda.....	20 00
Best two years old.....	T. Ward	Oakland	Alameda Chief.....	15 00
Best one year old.....	L. F. Eaton	Florin	Bob Mercury.....	20 00
Second best.....	T. Ward	Oakland	Onondaga.....	10 00
Best calf.....	W. C. Smith	Florin	King of Florin.....	15 00
Second best.....	W. C. Smith	Florin	Dude of Florin.....	7 50
<i>Cows.</i>				
Best three years old and over.....	W. C. Smith	Florin	Queen of Sacramento.....	40 00
Second best.....	T. Ward	Oakland	Bonita.....	20 00
Best two years old.....	P. Stanton	Sacramento	Lady Wells.....	30 00
Second best.....	W. C. Smith	Florin	Mona of Florin.....	15 00
Best one year old.....	W. C. Smith	Florin	Maud S of Florin.....	20 00
Second best.....	L. F. Eaton	Florin	Xariffa Baker.....	10 00
Best calf.....	L. F. Eaton	Florin	Frankie Baker.....	15 00
Second best.....	P. Stanton	Sacramento	My Own.....	7 50
<i>Herd.</i>				
Best over two years old.....	W. C. Smith	Florin	King of Y. B. and herd.....	80 00
Best bull of any age.....	W. C. Smith	Florin	Bob Mercury and herd.....	80 00
Best cow of any age.....	W. C. Smith	Florin	Irene of Strasburg.....	80 00

CLASS III—DEVONS.

<i>Bulls.</i>				
Best three years old and over.....	Boon Jones	Chico	Landin Duke.....	20 00
Best two years old.....	R. McEnespy	Chico	Protection.....	15 00
Best one year old.....	R. McEnespy	Chico	Mayflower Tom.....	10 00
<i>Cows.</i>				
Best three years old and over.....	R. McEnespy	Chico	Mayflower.....	20 00
Best two years old.....	R. McEnespy	Chico	Frances.....	15 00
Best calf.....	R. McEnespy	Chico	Rose of Butte.....	7 50
<i>Herd.</i>				
Best herd.....	R. McEnespy	Chico	Protection and herd.....	30 00
<i>Sweepstakes.</i>				
Best bull of any age.....	R. McEnespy	Chico	Protection.....	30 00
Best cow of any age.....	R. McEnespy	Chico	Mayflower.....	30 00
<i>CLASS IV—AYRSHIRES.</i>				
<i>Bulls.</i>				
Best three years old and over.....	Geo. Bement & Son.	Maple Grove Farm	Red Mikado.....	20 00
Best one year old.....	Geo. Bement & Son.	Maple Grove Farm	Faust.....	10 00
Best calf.....	Geo. Bement & Son.	Maple Grove Farm	Frazier.....	7 50
<i>Cows.</i>				
Best three years old.....	Geo. Bement & Son.	Maple Grove Farm	Marion.....	20 00
Best two years old.....	Geo. Bement & Son.	Maple Grove Farm	Sabrina.....	15 00
Best one year old.....	Geo. Bement & Son.	Maple Grove Farm	Satilla.....	10 00
Best calf.....	Geo. Bement & Son.	Maple Grove Farm	Manon.....	7 50
<i>Herd.</i>				
Best over two years old.....	Geo. Bement & Son.	Maple Grove Farm	Red Mikado and herd.....	30 00
Best under two years old.....	Geo. Bement & Son.	Maple Grove Farm	Faust and herd.....	15 00
<i>Sweepstakes.</i>				
Best bull of any age.....	Geo. Bement & Son.	Maple Grove Farm	Red Mikado.....	30 00
Best cow of any age.....	Geo. Bement & Son.	Maple Grove Farm	Sybilla.....	30 00

FIRST DEPARTMENT—Continued.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
CLASS V—HEREFORDS.				
<i>Bulls.</i>				
Best three years old and over.	Heilbron Bros.	Sacramento	Sir Stanley	\$20 00
Best one year old.	Heilbron Bros.	Sacramento	King William	10 00
Best calf.	Heilbron Bros.	Sacramento	Sultan 2d	7 50
<i>Cows.</i>				
Best three years old and over.	Heilbron Bros.	Sacramento	Mabel	20 00
Best two years old.	Heilbron Bros.	Sacramento	Dainty	15 00
Best one year old.	Heilbron Bros.	Sacramento	Lady Cora	20 00
Second best.	Heilbron Bros.	Sacramento	Louise	10 00
Best calf.	Heilbron Bros.	Sacramento	Josie H	7 50
<i>Herd.</i>				
Best over two years old.	Heilbron Bros.	Sacramento	Sir Stanley and four cows	30 00
Best under two years old.	Heilbron Bros.	Sacramento	King William and four cows	15 00
<i>Sweepstakes.</i>				
Best bull of any age.	Heilbron Bros.	Sacramento	Sir Stanley	30 00
Best cow of any age.	Heilbron Bros.	Sacramento	Mabel	60 00
CLASS VI—HOLSTEINS.				
<i>Bulls.</i>				
Best three years old and over.	G. B. Polhemus.	Coyote	Egmond Pride	40 00
Second best.	T. B. Hall	Sacramento	Monseil	20 00
Best two years old.	G. B. Polhemus.	Coyote	King Aggie Clothilde	30 00
Second best.	F. H. Burke	Menlo Park	Aggie Kathleen's Pride	15 00
Best one year old.	G. B. Polhemus.	Coyote	Fanie 2d's Pride	20 00
Second best.	F. H. Burke	Menlo Park	Troy Sedro	10 00
Best calf.	Bonnie Brae Cattle Co.	Hollister	Model of Bonnie Brae	15 00
Second best.	G. B. Polhemus.	Coyote	Sam Rucker	7 50
<i>Cows.</i>				
Best three years old and over.	G. B. Polhemus.	Coyote	Anna Egmond	40 00
Second best.	G. B. Polhemus.	Coyote	Anna Egmond	20 00
<i>Herd.</i>	Bonnie Brae Cattle Co.	Hollister	Lynde Lincoln 4th	15 00
Best over two years old.	G. B. Polhemus.	Coyote	Bonita of B. B.	7 50
Best under two years old.	T. B. Hall	Sacramento	King Aggie Clothilde and four cows	80 00
<i>Sweepstakes.</i>	F. H. Burke	Menlo Park	Friesian Duke and four cows	30 00
Best bull of any age.	G. B. Polhemus.	Coyote	King of Menlo	75 00
Best cow of any age.	G. B. Polhemus.	Coyote	Anna Egmond	65 00
CLASS VII—ANGUS AND GALLOWAYS.				
<i>Bulls.</i>				
Best three years old and over.	J. E. Camp	Perkins	Kier's Knight	40 00
Second best.	W. B. Gibson	Woodland	Wanda	20 00
Best two years old.	Dr. G. M. Dixon	Sacramento	Brilliant	15 00
Best one year old.	W. B. Gibson	Woodland	Wanda 4th	20 00
Second best.	J. E. Camp	Perkins	Egbert Laird	10 00
Best calf.	Dr. G. M. Dixon	Sacramento	Nero of Argonaut	15 00
Second best.	Dr. G. M. Dixon	Sacramento	Pacto	7 50
<i>Cows.</i>				
Best three years old and over.	Dr. G. M. Dixon	Sacramento	Coquette 2d of L. F.	40 00
Second best.	W. B. Gibson	Woodland	Nevada	20 00
Best two years old.	Dr. G. M. Dixon	Sacramento	Lady Whitmore	15 00
Best one year old.	Dr. G. M. Dixon	Sacramento	Dorcas of Argonaut	20 00
Second best.	J. E. Camp	Perkins	Grechen Lass	10 00
Best calf.	W. B. Gibson	Woodland	Annie Vince 2d	15 00
Second best.	J. E. Camp	Perkins	Lady of Brighton	7 50
<i>Herd.</i>				
Best Angus or Galloway herd.	J. E. Camp	Perkins	Kier's Knight and four cows	60 00
<i>Sweepstakes.</i>				
Best bull of any age.	W. B. Gibson	Woodland	Wanda	75 00
Best cow of any age.	Dr. G. M. Dixon	Sacramento	Coquette of L. F.	75 00
CLASS IX—GRADED.				
<i>Cows.</i>				
Best three years old and over.	R. Ashburner	Baden	Gilli Flower	30 00
Best two years old.	C. Younger & Son	San José	Pauline	10 00

FIRST DEPARTMENT—Continued.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
Best one year old Best calf	S. Tyron R. Ashburner	Sacramento Baden	Fawn Margery	\$5 00 5 00
Best beef breed	C. Younger & Son	San José	26th Kirklevington of F. H. and four cows	140 00
Best milk breed	G. B. Polhemus	Coyote	King Aaggie Clothilde and four cows	130 00
CLASS XI—MILCH COWS.				
Best milch cow	G. B. Polhemus	Coyote	Anna Egmond	30 00
Second best	G. B. Polhemus	Coyote	Ant. Poel	20 00

SHEEP.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
CLASS I—SPANISH MERINO.				
Best ram two years old and over	F. Bullard	Woodland	Stoneman	\$15 00
Best ram one year old and under two	F. Bullard	Woodland	Yolo Chief	11 25
Best three ram lambs	F. Bullard	Woodland		11 25
Best pen of five ewes, two years old and over	F. Bullard	Woodland		11 25
Best pen of five ewes, one year old and under two	F. Bullard	Woodland		11 25
Best pen of five ewe lambs	F. Bullard	Woodland		11 25
Best ram and five of his lambs	F. Bullard	Woodland		15 00
CLASS II—FRENCH MERINO.				
Best ram two years old and over	J. H. Glide	Sacramento	James Roberts	15 00
Best ram one year old and under two	J. H. Glide	Sacramento	No. 1	11 25
Best three ram lambs	J. H. Glide	Sacramento		11 25
Best pen of not less than five ewes, two years old and over	J. H. Glide	Sacramento		11 25
Best pen of not less than five ewes, one year old and over	J. H. Glide	Sacramento		11 25
Best pen of not less than five ewes, one year old and over	J. H. Glide	Sacramento		11 25
Best ram of any age	A. Smith	Redwood City	Royal Duke of California 2d	20 00
Second best	J. H. Glide	Sacramento	John Dryden	10 00
Best pen of not less than five ewes of any age	A. Smith	Redwood City		20 00
Second best	J. H. Glide	Sacramento		10 00
Best ram and five of his lambs	A. Smith	Redwood City	Royal Duke of California 2d	20 00
Second best	J. H. Glide	Sacramento	John Dryden	10 00
Best three ram lambs	A. Smith	Redwood City		22 50
Second best	J. H. Glide	Sacramento		11 25
Best pen of not less than five ewe lambs	A. Smith	Redwood City		22 50
Second best	J. H. Glide	Sacramento		11 25
SWEETSTAKES.				
Best Merino ram and five of his lambs	F. Bullard	Woodland	Stoneman	36 00
Best Shropshire ram and five of his lambs	J. H. Glide	Sacramento	Jumbo	30 00
ANGORA GOATS.				
Thoroughbreds.				
Best buck two years old and over	T. H. Harlan	Williams	Gov. Helm, Jr.	25 00
Second best	C. P. Bailey	San José	Soledad	12 50
Best buck under two years	T. H. Harlan	Williams	Oasis	15 00
Second best	C. P. Bailey	San José	Mariposa	7 50
Best pen of not less than three does, two years old and over	C. P. Bailey	San José		25 00
Second best	H. H. Harlan	Venado		12 50
Best pen of not less than three does, under two years	T. H. Harlan	Williams		15 00
Second best	C. P. Bailey	San José		7 50
Graded.				
Pen of not less than three does, two years old and over	H. H. Harlan	Venado		10 00
Pen of not less than three does, under two years	T. H. Harlan	Williams		7 50
Herds.				
Best herd of not less than ten, of any age or breed	T. H. Harlan	Williams		30 00
Second best	C. P. Bailey	San José		15 00

PIEST DEPARTMENT—Continued.
SWINE.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
CLASS I—BERKSHIRE.				
Best boar two years old and over	A. Smith	Redwood City	Model Duke.	\$20 00
Second best.	T. Waite	Perkins	Redwood Prince	10 00
Best boar one year old	A. Smith	Redwood City	Archie	15 00
Second best.	T. Waite	Perkins	Tom Ward	7 50
Best boar six months old and under one year	T. Waite	Perkins	Pacific Prince	10 00
Second best.	A. Smith	Redwood City	Redwood Model	5 00
Best breeding sow two years old and over	T. Waite	Perkins	Redwood Belle	20 00
Second best.	A. Smith	Redwood City	Redwood Duchess	10 00
Best sow one year old and under two	A. Smith	Redwood City	Victoria	15 00
Second best.	A. Smith	Redwood City	Redwood Queen	7 50
Best sow six months old and under one year	A. Smith	Redwood City	Redwood Ruby	10 00
Second best.	A. Smith	Redwood City	Redwood Beauty	5 00
Best sow and six pigs under three months	A. Smith	Redwood City	Redwood Sallie and six pigs	10 00
Best pair of pigs under six months	A. Smith	Redwood City	Royal Duke and Perfection	7 50
Sweepstakes.				
Best boar of any age	A. Smith	Redwood City	Model Duke.	24 00
Best sow of any age	T. Waite	Perkins	Redwood Belle	24 00
Best pen of six pigs under six months	A. Smith	Redwood City		12 00
Best family—two sows, one boar, and six pigs	A. Smith	Redwood City		12 00
CLASS II—ESSEX.				
Best boar two years old and over	Geo. Bement & Son.	Maple Grove Farm	Tyler	10 00
Best sow six months old and under one year	Geo. Bement & Son.	Maple Grove Farm	Martin	5 00
Best sow two years old and over	Geo. Bement & Son.	Maple Grove Farm	Duchess of Essex	10 00
Best sow one year old and under two	Geo. Bement & Son.	Maple Grove Farm	California Duchess	7 50
Best sow six months old and under one year	Geo. Bement & Son.	Maple Grove Farm		5 00
Best pair of pigs under six months	Geo. Bement & Son.	Maple Grove Farm		7 50
Sweepstakes.				
Best boar of any age	Geo. Bement & Son.	Maple Grove Farm	Martin	12 00
Best sow of any age	Geo. Bement & Son.	Maple Grove Farm	California Duchess	12 00
CLASS III—DORSET.				
Best boar of any age	J. Melvin	Redwood City	Redwood Ruby	20 00
Best sow one year old and under two	A. Smith	Davisville	Angela Golddust	10 00
Second best.	J. Melvin	Redwood City	Angela Golddust	15 00
Best sow six months old and under one year	P. H. Murphy	Davisville	Michigan Girl	7 50
Second best.	A. Smith	Perkins	Beauty	10 00
Best sow and six pigs under three months	J. Melvin	Redwood City	Richmond Belle	5 00
Second best.	A. Smith	Davisville	Juliet	10 00
Best boar of any age	A. Smith	Redwood City	Sunlight	15 00
Best sow of any age	J. Melvin	Redwood City	San Carlos	7 50
Best pen of six pigs under six months	A. Smith	Davisville	Angela Golddust	24 00
Best family—one boar, two sows, and six pigs	A. Smith	Redwood City		24 00
	A. Smith	Redwood City		24 00

POULTRY.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
LIGHT BRAHMAS.				
Best cock and hen	T. Waite	Perkins		\$3 00
Best cockerel and pullet	C. J. Cox	Sacramento		3 00
Best breeding pen	T. Waite	Perkins		10 00
DARK BRAHMAS.				
Best cock and hen	E. H. Freeman	Santa Clara		3 00
Best breeding pen	E. H. Freeman	Santa Clara		10 00
LANGSHANS.				
Best cock and hen	G. E. Duden	Sacramento		3 00
Best breeding pen	G. E. Duden	Sacramento		5 00
BUFF COCHINS.				
Best cock and hen	C. J. Cox	Sacramento		3 00
Best cockerel and pullet	T. Waite	Perkins		3 00
Best breeding pen	C. J. Cox	Sacramento		10 00
Cock and hen of White Cochins	C. J. Cox	Sacramento		Special mention.

FIRST DEPARTMENT—Continued.

LIVE STOCK.	Name of Owner.	Address.	Name of Animal.	Award.
PARTRIDGE COCHINS.				
Best cock and hen.....	E. H. Freeman	Santa Clara	.....	\$3 00
Best cockerel and pullet.....	E. H. Freeman	Santa Clara	.....	3 00
Best breeding pen.....	E. H. Freeman	Santa Clara	.....	10 00
PLYMOUTH ROCKS.				
Best cock and hen, two kinds, barred and white.....	E. H. Freeman	Santa Clara	.....	6 00
Best cockerel and pullet, two kinds.....	E. H. Freeman	Santa Clara	.....	6 00
Best breeding pen, barred and white.....	E. H. Freeman	Santa Clara	.....	20 00
BLACK LEGHORNS.				
Best cock and hen.....	C. J. Cox	Sacramento	.....	3 00
Best cockerel and pullet.....	C. J. Cox	Sacramento	.....	3 00
Best breeding pen.....	C. J. Cox	Sacramento	.....	5 00
BROWN LEGHORNS.				
Best cock and hen.....	T. Waite	Perkins	.....	3 00
Best cockerel and pullet.....	C. J. Cox	Sacramento	.....	3 00
Best breeding pen.....	C. J. Cox	Sacramento	.....	10 00
WHITE LEGHORNS.				
Best cock and hen.....	E. H. Freeman	Santa Clara	.....	3 00
Best cockerel and pullet.....	C. J. Cox	Sacramento	.....	3 00
Best breeding pen.....	E. H. Freeman	Santa Clara	.....	10 00
WHITE-FACED BLACK SPANISH.				
Best cock and hen.....	T. Waite	Perkins	.....	3 00
Best cockerel and pullet.....	G. E. Duden	Sacramento	.....	3 00
Best breeding pen.....	G. E. Duden	Sacramento	.....	10 00
HOUDANS.				
Best cock and hen.....	E. H. Freeman	Santa Clara	.....	3 00
Best cockerel and pullet.....	T. Waite	Perkins	.....	3 00
SILVER-SPANGLED HAMBOURG.				
Best cock and hen.....	C. J. Cox	Sacramento	.....	3 00
Best cockerel and pullet.....	T. Waite	Perkins	.....	3 00
Best breeding pen.....	T. Waite	Perkins	.....	5 00
WYANDOTTES.				
Best cock and hen (white).....	E. H. Freeman	Santa Clara	.....	3 00
Best cock and hen (golden).....	E. H. Freeman	Santa Clara	.....	3 00
Best cock and hen (silver).....	C. J. Cox	Sacramento	.....	3 00
Best cockerel and pullet (silver).....	E. H. Freeman	Santa Clara	.....	3 00
Best cockerel and pullet (white).....	E. H. Freeman	Santa Clara	.....	3 00
Best breeding pen (silver).....	E. H. Freeman	Santa Clara	.....	10 00
Best breeding pen (white).....	E. H. Freeman	Santa Clara	.....	10 00
SEABRIGHT BANTAMS.				
Best cock and hen.....	T. Waite	Perkins	.....	3 00
Best breeding pen.....	E. H. Freeman	Santa Clara	.....	10 00
One pair white Dorkins.....	C. J. Cox	Sacramento	.....	Special mention.
BRONZE TURKEYS.				
Best pair.....	T. Waite	Perkins	.....	5 00
TOULOUSE GESE.				
Best pair.....	P. Stanton	Sacramento	.....	5 00
DUCKS.				
Best Rouen.....	T. Waite	Perkins	.....	5 00
Best Pekin.....	T. Waite	Perkins	.....	5 00
Second best.....	E. H. Freeman	Santa Clara	.....	3 00
GUINEA FOWLS.				
Best pair.....	T. Waite	Perkins	.....	5 00
Second best.....	G. E. Duden	Sacramento	.....	3 00
Best pair.....	C. W. Eldred	Sacramento	.....	3 00
GOLDEN POLANDS.				

SECOND DEPARTMENT.

MACHINERY, IMPLEMENTS, ETC.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
CLASS I—MACHINERY, ENGINES, ETC.			
Pacific Manufacturing Co.	San Francisco.	Best pump for irrigation or mining purposes.	.....\$20 00
Bean Spray Pump Co.	Los Gatos.	Best spray pump for orchards.	.....\$25 00
Bean Spray Pump Co.	San Francisco.	Best well pump.	.....\$10 00
San Francisco Tool Co.	Sacramento.	Best steam engine.	.....\$30 00
Stanton, Thomson & Co.	San Francisco.	Best portable hand machine for manufacturing field or garden fence.	.....\$10 00
Daniel Best.	San Leandro.	Best traction steam engine.	.....\$100 00
Daniel Best.	San Leandro.	Best display of machinery from one shop.	.....\$50 00
Crouch & Lyman.	Sacramento.	Best fire extinguisher.	.....Diploma.
W. H. Murray.	San Francisco.	Best water wheel, California manufacture.	.....\$15 00
H. O. Beatty.	Sacramento.	For steam motor for pumps for irrigating or mining purposes.	.....Honorable mention.
CLASS II—AGRICULTURAL MACHINES.			
Walter A. Wood Machine Co.	San Francisco.	Best hay rake.	.....\$5 00
Schaw, Ingram, Batcher & Co.	Sacramento.	Best gopher trap.	.....Diploma.
Schaw, Ingram, Batcher & Co.	Sacramento.	Best post-hole auger.	.....Diploma.
Stanton, Thomson & Co.	Sacramento.	Best cider mill and press.	.....Diploma.
Stanton, Thomson & Co.	Sacramento.	Best hay and straw cutter.	.....Diploma.
Stanton, Thomson & Co.	Sacramento.	Best power corn sheller.	.....\$20 00
J. F. Hill.	Sacramento.	Best hay press.	.....\$50 00
S. C. H. Agricultural Works.	Stockton.	Best display of agricultural machinery by one house, California manufacture.	.....\$80 00
Baker & Hamilton.	Sacramento.	Best thrashing machine.	.....Diploma.
Baker & Hamilton.	Sacramento.	Best lawn mower.	.....Diploma.
Baker & Hamilton.	Sacramento.	Best corn sheller (hand).	.....\$10 00
Benicia Agricultural Works.	Benicia.	Best sweep horse power.	.....\$10 00
CLASS III—AGRICULTURAL MACHINES.			
Isaac Sylvester.	Colusa.	Best weed cutter.	.....\$5 00
Isaac Sylvester.	Lower Lake.	Best combined cutter, roller, and weeder.	.....Silver medal.
Stanton, Thomson & Co.	Sacramento.	Best wheat drill.	.....\$10 00
Stanton, Thomson & Co.	Sacramento.	Best grain broadcast sowing machine.	.....\$10 00
Stanton, Thomson & Co.	Sacramento.	Best one-horse cultivator.	.....\$5 00
Benicia Agricultural Works.	Benicia.	Best hay pitching machine.	.....\$10 00
Benicia Agricultural Works.	Benicia.	Best harrow.	.....\$10 00
Baker & Hamilton.	Sacramento.	Best cultivator.	.....\$10 00
Baker & Hamilton.	Sacramento.	Best reaping machine.	.....\$10 00
Baker & Hamilton.	Sacramento.	Best combined reaper and mower.	.....\$10 00
Baker & Hamilton.	Sacramento.	Best potato planter.	.....\$5 00
Baker & Hamilton.	Sacramento.	Best double-shovel plow.	.....Diploma.
Wm. Gutenberg.	Sacramento.	Best field roller and crusher.	.....\$10 00
S. C. H. Agricultural Works.	San Francisco.	Best ramie cleaning machine.	.....\$20 00
Matteson & Williamson.	Stockton.	For combined thrasher, etc.	.....Honorable mention.
Houser, Haines & Knight.	Stockton.	For combined header and harvester.	.....Honorable mention.
Holt Bros.	Stockton.	For combined header, thrasher, and cleaner.	.....Honorable mention.
CLASS IV—AGRICULTURAL IMPLEMENTS.			
Aermoter Co.	Sacramento.	Best Aermoter windmill.	.....Diploma and \$22 50
S. C. H. Agricultural Works.	Stockton.	Best grain cleaning attachment for combined harvesters.	.....\$10 00
S. C. H. Agricultural Works.	Stockton.	Best grain cleaner, independent.	.....\$10 00
Klees & Piles.	Sacramento.	Best fanning mill.	.....\$5 00
Holbrook, Merrill & Stetson.	Sacramento.	Best refrigerator.	.....Diploma.
Benicia Agricultural Works.	Benicia.	Best farm feed mill.	.....\$10 00
H. L. Hutchinson.	San Francisco.	Best platform scales.	.....Silver medal.
F. J. Johnson.	Sacramento.	Best farm gate.	.....\$10 00
CLASS V—TOOLS AND HOUSEHOLD IMPLEMENTS.			
Deere Implement Co.	San Francisco.	Best garden seed drill.	.....\$2 00
E. W. Melvin.	Sacramento.	Best washing machine.	.....\$5 00
A. S. Hopkins & Bro.	Sacramento.	Best churn.	.....\$5 00
A. S. Hopkins & Bro.	Sacramento.	Best clothes horse to occupy least space.	.....Diploma.
Schaw, Ingram, Batcher & Co.	Sacramento.	Best clothes wringer.	.....Diploma.
Stanton, Thomson & Co.	Sacramento.	Best display of haying and harvesting tools.	.....\$10 00
Stanton, Thomson & Co.	Sacramento.	Best road scraper.	.....\$10 00
Stanton, Thomson & Co.	Sacramento.	Best excavating scraper.	.....\$10 00
Arnes & Dallam.	San Francisco.	Best display of dairy machinery.	.....\$20 00
Arnes & Dallam.	San Francisco.	Best butter worker.	.....Diploma.
Commercial Machine Works.	San Francisco.	Best wine and cider press.	.....S. M. and \$10 00
Mosher, Chandler & Co.	San Francisco.	Best fruit grader.	.....\$5 00
Huntington-Hopkins Co.	Sacramento.	Best sausage-meat cutter and stuffer.	.....\$2 00
Huntington-Hopkins Co.	Sacramento.	Best pruning shears.	.....\$2 50

THIRD DEPARTMENT.

TEXTILE FABRICS.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
CLASS I—CLOTHING AND KINDRED TEXTURES.			
Carlson-Currier Mfg. Co.	San Francisco.	Best display of silk hosiery, American manufacture.	Silver medal.
Gatmann & Wilson	Sacramento.	Best display of bolting cloth.	Silver medal.
Gatmann & Wilson	Sacramento.	Best display of dry goods.	\$20 00
Gatmann & Wilson	Sacramento.	Best display of fancy goods.	\$20 00
Mrs. H. Ladd	Sacramento.	Best knitted shawl.	\$5 00
Chas. J. Fredericks & Co.	Sacramento.	Best exhibit of men's hats and caps.	Silver medal.
Chas. J. Fredericks & Co.	Sacramento.	Best silk hat.	\$5 00
Chas. J. Fredericks & Co.	Sacramento.	Best soft hat.	\$5 00
P. Beamish	San Francisco.	Best gentlemen's shirts.	Silver medal.
P. Beamish	San Francisco.	Best exhibit of neckties and bows.	Silver medal.
Ingram & Bird	Sacramento.	Best exhibit of carpets and rugs.	\$20 00
Ingram & Bird	Sacramento.	Best fifteen yards of woolen carpets.	Silver medal.
Ingram & Bird	Sacramento.	Best exhibit of window curtains, cornices, and trimmings.	Silver medal.
Ingram & Bird	Sacramento.	Best exhibit of window shades and fixtures.	Silver medal.
Mrs. Belle Quarles	Sacramento.	Best two Turkish rugs.	Diploma.
California Cotton Mills	East Oakland.	Best display of towels and table cloths.	\$10 00
California Cotton Mills	East Oakland.	Best ten pounds of dressed flax.	\$5 00
California Cotton Mills	East Oakland.	Best ten yards of cloth (flax cotton).	\$5 00
California Cotton Mills	East Oakland.	Best linen sack twine, California manufacture.	\$5 00
California Cotton Mills	East Oakland.	Best ten yards kersey.	\$5 00
California Cotton Mills	East Oakland.	Best display of cotton and toweling, California manufacture.	\$25 00
California Cotton Mills	East Oakland.	Best stocking yarn.	\$3 00
California Cotton Mills	East Oakland.	Best carpet warp.	\$5 00
California Cotton Mills	East Oakland.	Best exhibit of burrap rugs.	Silver medal.
California Cotton Mills	East Oakland.	Best exhibit of ladies' shoulderbraces and corsets.	Silver medal.
Mrs. G. W. Threlkel	San Francisco.	Best Mackinac blanket.	Gold medal.
W. H. Murray	San Francisco.	Best exhibit of naval and military goods and regalias.	\$5 00
Daniel Norcross	San Francisco.	Best double carpet coverlet.	Silver medal.
Chas. M. Campbell	Sacramento.	Best collection of furs, not less than six pieces.	\$10 00
Mrs. E. B. Chambers	Arcata.	Best ten yards of rag carpet.	\$5 00
WAXWORK.			
Mrs. M. E. Curdis	Sacramento.	For display of lace made by hand, not less than five pieces.	Special mention.
Mrs. H. C. Briggs	Sacramento.	For embroidered silk quilt.	Special mention.
Miss Edith Hughton	Sacramento.	Best variety of porcelain painting, not less than twelve pieces.	\$10 00
Mrs. Wm. East.	Chico.	Best embroidered chair seat and back.	\$5 00
Mrs. Wm. East.	Chico.	Best fire screen.	\$5 00
Mrs. Wm. East.	Chico.	Best hammered brass.	\$5 00
Mrs. Wm. East.	Chico.	Best silk embroidery on flannel.	\$5 00
Mrs. Wm. East.	Chico.	Best crocheted shawl.	\$3 00
Mrs. Wm. East.	Chico.	Best lounge afghan.	\$2 00
Mrs. Wm. East.	Chico.	Best child's afghan.	\$2 00
Mrs. Wm. East.	Chico.	Best chenille embroidered toilet set.	\$5 00
Miss Maye Carroll	Sacramento.	Best Spanish drawn work.	\$5 00
Mrs. G. Graves	Sacramento.	For homiton lace work.	Special mention.
Mrs. G. Graves	Sacramento.	For painted table scarf.	Special mention.
Mrs. F. T. Robinson	Florin.	Best crazy patchwork quilt.	\$3 00
Mrs. E. C. Atkinson.	Sacramento.	Best embroidered bedspread.	\$5 00
Mrs. E. C. Atkinson.	Sacramento.	Best painted panel.	\$3 00
Mrs. H. D. Nash	Sacramento.	For linen embroidery.	Special mention.
Mrs. H. D. Nash	Sacramento.	Best Persian embroidery.	\$3 00
Mrs. H. D. Nash	Sacramento.	Best Turkish embroidery.	\$3 00
Mrs. H. D. Nash	Sacramento.	Best arrasene embroidery.	\$3 00
Mrs. H. D. Nash	Sacramento.	For pillow shams, Spanish drawn work.	Special mention.
Misses Brothers	Sacramento.	Best display of millinery.	\$20 00
Misses Brothers	Sacramento.	Best velvet bonnet.	\$5 00
Misses Brothers	Sacramento.	Best hat.	\$5 00
Misses Brothers	Sacramento.	Best silk bonnet.	\$5 00
Misses Brothers	Sacramento.	Best display of artificial flowers.	\$10 00
Misses Brothers	Sacramento.	Best display of feathers from California raised birds.	\$10 00
Misses Brothers	Sacramento.	Best display of decorative painting on wood, plush, silk, velvet, glass, birch bark, bolting cloth, linen, etc.	\$10 00
Mrs. Geo. D. Stewart	Sacramento.	Best hand sewing, not less than three pieces.	\$5 00
Mrs. A. J. Gardiner	Sacramento.	Best ornamental grasses.	\$2 00
Mrs. A. J. Gardiner	Sacramento.	Best crocheted bedspread.	\$5 00
Mrs. D. L. Townsend	Sacramento.	Best needlework picture.	\$5 00
Mrs. W. W. Willis	Sacramento.	Best carriage afghan.	\$3 00
Mrs. W. W. Willis	Sacramento.	Best two patchwork quilts.	\$3 00
Mrs. M. B. Dudley	San Francisco.	Best crocheted cape.	\$2 00
Mrs. M. B. Dudley	San Francisco.	Best silk plain work.	\$2 00
Mrs. M. B. Dudley	San Francisco.	Best pair knit wool stockings.	\$3 00
Mrs. S. Conrad	Sacramento.	Best darned net, not less than three pieces.	\$2 00
Mrs. H. Ladd	Sacramento.	Best shell work.	\$2 00
Mrs. C. A. Patrick	Sacramento.	Best display of children's clothing, California make.	\$15 00

THIRD DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
Mrs. C. A. Patrick	Sacramento	Best embroidered children's clothes	\$5 00
Mrs. C. A. Patrick	Sacramento	For embroidered table cover	Special mention.
Mrs. George Muddox	Sacramento	For crocheted bedspread	Special mention.
Mrs. H. Lawton	Sacramento	For patchwork quilt	Special mention.
Mrs. F. R. Griffiths	Sacramento	For Spanish drawn work	\$2 00
Mrs. C. S. Kendall	Humboldt	Best knit mittens	\$2 00
Miss P. C. Brown	Sacramento	Best embroidered handkerchief	\$2 00
Miss P. C. Brown	Sacramento	Best Kensington embroidery with crewel on wool goods	\$3 00
Miss P. C. Brown	Sacramento	Best bead work by hand	\$3 00
Miss P. C. Brown	Sacramento	Best honiton lace work	\$3 00
Miss F. C. Brown	Sacramento	Best renaissance embroidery in rope silk	\$3 00
Mrs. L. Schubert	Sacramento	For gobelin embroidery	Special mention.
Mrs. L. Schubert	Sacramento	Best alliance embroidery	Silver medal.
Miss Longmore	Willows	Best embroidered silk quilt	Special mention.
Mrs. R. Davis	Sacramento	For applique work	\$2 00
Mrs. R. Davis	Sacramento	Best hearth rug, hand made	Special mention.
Miss Emma Lundgren	Sutter Creek	For crocheted bedspread	Special mention.
Mrs. P. Eravw	Sacramento	For two crazy patchwork quilts	Special mention.
Mrs. Belle Quarles	Sacramento	For two embroidered table scarfs	Special mention.
Mrs. Laura Morton	San Francisco	Best Kensington embroidery with floss on satin	\$5 00
Mrs. Laura Morton	San Francisco	Best embroidered sofa cushion and pillow	\$5 00
Mrs. Laura Morton	San Francisco	Best embroidered dressing gown	\$5 00
Mrs. Laura Morton	San Francisco	Best embroidered table cover (four ends)	\$5 00
Mrs. Laura Morton	San Francisco	Best embroidered table scarf (two ends)	\$5 00
Mrs. Laura Morton	San Francisco	Best surface plush painting	\$5 00
Mrs. Laura Morton	San Francisco	Best applique work	\$2 00
Mrs. Laura Morton	San Francisco	Best display of linen embroidery	\$5 00
Mrs. Laura Morton	San Francisco	Best embroidered necktie case	\$5 00
Mrs. Laura Morton	San Francisco	Best, largest, and handsomest display of articles made wholly by lady or miss exhibiting same	\$20 00
Mrs. Laura Morton	San Francisco	Best embroidered wall panel	\$5 00
Mrs. Laura Morton	San Francisco	Best embroidered ottoman cover	\$3 00
Mrs. Laura Morton	San Francisco	Best gobelin embroidery	\$5 00
Mrs. J. P. Gilbert	San Francisco	Best painting on ivory	\$5 00
Mrs. J. P. Gilbert	Sacramento	Best raised wool work	\$5 00
Mrs. J. P. Gilbert	Sacramento	Best display of quilts	\$5 00
Mrs. J. P. Gilbert	Sacramento	Best piece of painting on porcelain	\$5 00
Mrs. J. P. Gilbert	Sacramento	Best piece of decorative painting	\$20 00
Mrs. Laura Morton	San Francisco	Best piece of embroidery work by a lady or miss	\$20 00
CLASS II—JUVENILE.			
Miss Kelly	Sacramento	Best patchwork quilt	Napkin ring.
Miss Kelly	Sacramento	Best worsted embroidery	Butter knife.
Miss Beryl Patrick	Sacramento	Best and most tastily made calico dress by a miss eleven years old	\$5 00
Mary Ann Workman	Los Angeles	Best silk patchwork quilt	Napkin ring.
Mary Ann Workman	Los Angeles	Best silk embroidery	Butter knife.
CLASS III—PRINTING, LITHO-GRAPHING, ETC.			
E. J. Shattuck	San Francisco	Best printing ink	Silver medal.
W. H. Murray	San Francisco	Best display of Acme wood engraving	Silver medal.
Francis & Valentine	San Francisco	Best specimen of printing (posters)	Silver medal.
Daniel Norcross	San Francisco	Best specimen of printing (book)	Silver medal.
CLASS IV—MISCELLANEOUS.			
Mrs. H. H. King	Sacramento	Best hair work	\$3 00
A. J. Pommer	Sacramento	Best Kensington embroidery made by machine	Diploma.
W. S. Enos	Davisville	Best knit collar, by a lady with one hand	\$5 00
Mrs. George Muddox	Sacramento	Best two crocheted tidies	\$3 00
Mrs. J. T. Barrett	Sacramento	Best two fancy workbags made of muskmelon seeds	\$3 00
A. A. Krull	Sacramento	Best fancy floor rugs	\$3 00
Mrs. R. Davis	Sacramento	Best pair silk curtains	\$3 00
Mrs. R. Davis	Sacramento	Best crazy patchwork curtains	\$2 00
Levi Straus & Co.	San Francisco	Best display of overalls	Silver medal.
Chauncey Langdon	Rohnerville	Best display of buckskin suits	\$5 00
Miss Jennie A. McConnell	Elk Grove	Best picture scarf	\$5 00
Theo. W. Schwamb	Sacramento	Best arrasene embroidery made on machine	\$5 00
P. Beamish	San Francisco	Best sanitary wool underwear	Silver medal.
Mrs. M. H. Ober	San Francisco	Best display of ladies' union underwear	\$5 00
Mrs. J. M. Hamilton	Sacramento	Best crocheted work	\$3 00
W. H. Murray	San Francisco	Best display of ramie cloth	Silver medal.
Miss Agnes Kenny	San Francisco	For skillful and rapid work on machine	Diploma.
Miss Annie Burke	San Francisco	For skillful and rapid work on machine	Diploma.
Kittie G. Landers	San Francisco	For skillful and rapid work on machine	Diploma.
Belle F. Coogan	San Francisco	For skillful and rapid work on machine	Diploma.
Mrs. Joseph W. Johnson	Sacramento	Best painting on glass	\$5 00
Mrs. C. A. Patrick	Sacramento	For twenty pieces ladies' underwear	Special mention.

FOURTH DEPARTMENT.

MECHANICAL PRODUCTS.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
CLASS I.—MANUFACTURES OF PA- PER, LEATHER, AND RUBBER.			
James Longshore	Sacramento	Best exhibit of traveling trunks, valises, and bags	Silver medal and \$10 00
Huntington-Hopkins Co.	Sacramento	Best display of rubber hose and belting	Silver medal.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of leather hose and belting	Silver medal.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of cordage	Silver medal.
Whittier, Fuller & Co.	Sacramento	Best display of wall paper	\$5 00
Whittier, Fuller & Co.	Sacramento	Best display of paper hangings and borders	\$5 00
Thos. Hildreth	Sacramento	Best display of Mexican saddles	\$10 00
C. P. Bailey	San José	Best display of Angora goat robes	
Pacific Roll Paper Co., A. S. Hop- kins, agent	Sacramento	Best display of paper manufactured in California, not less than two tons	\$20 00
CLASS II.—WORKED METALS.			
Sacramento Glass & Crockery Co.	Sacramento	Best display of plated ware	\$10 00
Huntington-Hopkins Co.	Sacramento	Best display of blacksmithing tools	Diploma and \$10 00
Huntington-Hopkins Co.	Sacramento	Best display of table cutlery	Silver medal.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of modern building hardware	\$20 00
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of general hardware	\$20 00
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of iron and steel (Pacific Coast manufacture)	Silver medal.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of mechanics' tools	Silver medal.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of horseshoes, machine made	\$5 00
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of pocket cutlery	\$5 00
Schaw, Ingram, Batchelor & Co.	Sacramento	Best circular saw	\$5 00
Schaw, Ingram, Batchelor & Co.	Sacramento	Best mill saw	\$5 00
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of files	Diploma.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best exhibit of anti-friction metal	Diploma.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best exhibit of shot	Diploma and \$10 00
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of butchers' supplies and goods	Diploma.
Schaw, Ingram, Batchelor & Co.	Sacramento	Best display of lamps	Diploma.
Jos. Thieben Crockery Co.	Sacramento	Best display of clocks	Diploma.
Jos. Thieben Crockery Co.	Sacramento	Best display of clock work	\$20 00
D. D. Wass	San Francisco	Best iron fence	Diploma
D. D. Wass	San Francisco	Best display of wire goods	Diploma and \$5 00
W. H. Murray	San Francisco	Best barbed wire fencing	Silver medal and \$5 00
CLASS III.—STOVES, CASTINGS, ETC.			
A. Aitken	Sacramento	Best parlor grate	\$3 00
A. Aitken	Sacramento	Best marbleized stone	\$5 00
Sacramento Glass & Crockery Co.	Sacramento	Best ornamental statuary	\$5 00
L. L. Lewis & Co.	Sacramento	Best cooking stove, for coal	\$5 00
L. L. Lewis & Co.	Sacramento	Best parlor stove	\$5 00
L. L. Lewis & Co.	Sacramento	Best cooking range	\$10 00
L. L. Lewis & Co.	Sacramento	Best gasoline stove	\$5 00
L. L. Lewis & Co.	Sacramento	Best display of hollow ironware	\$5 00
L. L. Lewis & Co.	Sacramento	Best portable range	\$5 00
Jos. Thieben Crockery Co.	Sacramento	Best assortment of Japanese ware	\$10 00
Holbrook, Merrill & Stetson	Sacramento	Best cooking stove, for wood	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best gas stove	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best oil stove	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best warming furnace	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best specimen of marbleized iron	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best ornamental fruit and flower stand	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best farmer's caldrons, or steamers	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best laundry stove	\$5 00
Holbrook, Merrill & Stetson	Sacramento	Best assortment of bathing tubs	Diploma.
Holbrook, Merrill & Stetson	Sacramento	Best water and steam gates	Diploma.
Holbrook, Merrill & Stetson	San Francisco	Best gas and water pipes	Diploma.
J. Hendy Machine Works	San Francisco	Best farm bell	\$5 00
James Linforth	San Francisco	Best ornamental zinc work	Diploma.
W. H. Murray	San Francisco	For laundry stove	Special mention for size
L. L. Lewis & Co.	Sacramento	For steam warming apparatus	Special mention.
Crouch & Lyman	Sacramento		
CLASS IV.—MUSICAL INSTRUMENTS.			
J. F. Cooper	Sacramento	Best general display of musical instruments	Silver medal and \$20 00
J. F. Cooper	Sacramento	Best upright piano	\$20 00
J. F. Cooper	Sacramento	Best organ	\$20 00
M. L. Hammer	Sacramento	Best strung or reed instruments made in California	Silver medal.
CLASS V.—FURNITURE.			
A. Aitken	Sacramento	Best wooden mantel	\$10 00
Capital Furniture Co.	Sacramento	Best set of school furniture	\$10 00
Dittmar & Wheat	Sacramento	Best lounge	\$5 00
Dittmar & Wheat	Sacramento	Best set of parlor chairs	\$10 00

FOURTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
Dittmar & Wheat	Sacramento	Best display of willow furniture	\$10 00
John Breuner	Sacramento	Best display of furniture	Diploma and \$20 00
John Breuner	Sacramento	Best set of bed-room furniture	\$10 00
John Breuner	Sacramento	Best set of dining-room furniture	\$10 00
John Breuner	Sacramento	Best set of library furniture	\$10 00
John Breuner	Sacramento	Best set of office furniture	\$10 00
John Breuner	Sacramento	Best extension table	\$5 00
John Breuner	Sacramento	Best dressing bureau	\$10 00
John Breuner	Sacramento	Best pair side tables	\$5 00
John Breuner	Sacramento	For display of upholstery	Special mention.
John Breuner	Sacramento	Best hair mattress	\$5 00
John Breuner	Sacramento	Best wool mattress	\$5 00
John Breuner	Sacramento	Best wardrobe	\$10 00
John Breuner	Sacramento	Best sick chair or couch	\$5 00
John Breuner	Sacramento	Best spring mattress	\$5 00
John Breuner	Sacramento	Best center table	\$5 00
Whittier, Fuller & Co.	Sacramento	Best set of parlor furniture	\$20 00
Ingram & Bird	Sacramento	For set of bed-room furniture	Special mention.
Ingram & Bird	Sacramento	Best folding bed	Diploma and \$10 00
Ingram & Bird	Sacramento	Best sofa	\$10 00
Ingram & Bird	Sacramento	Best display of upholstery	\$10 00
W. A. Clark	San Francisco	Best display of iron furniture	\$10 00
W. A. Clark	San Francisco	Best sofa bed	Diploma.
Ingram & Bird	Sacramento	For desk washstand	Special mention.
W. H. Jones	Colusa	Best display of California woods	Silver medal.
CLASS VI—WOODENWARE.			
A. S. Hopkins & Bro.	Sacramento	Best display of cedarware	\$5 00
A. S. Hopkins & Bro.	Sacramento	Best display of pineware	\$5 00
A. S. Hopkins & Bro.	Sacramento	Best display of oakware	\$5 00
A. S. Hopkins & Bro.	Sacramento	Best display of willowware	\$10 00
A. S. Hopkins & Bro.	Sacramento	Best display of split-wood baskets	\$3 00
A. S. Hopkins & Bro.	Sacramento	Best display of osier	\$5 00
A. S. Hopkins & Bro.	Sacramento	Best display of woodenware	\$25 00
A. S. Hopkins & Bro.	Sacramento	Best exhibition of broom corn, brooms, and brushes	\$10 00
A. S. Hopkins & Bro.	Sacramento	Best assortment of best brooms	\$5 00
CLASS VII—INSTRUMENTS OF FINE WORKMANSHIP.			
Huntington-Hopkins Co.	Sacramento	Best double-barrel shotgun	\$5 00
Huntington-Hopkins Co.	Sacramento	Best display of firearms	Silver medal.
Schaw, Ingram, Batchler & Co.	Sacramento	Best sporting powder	Diploma.
Schaw, Ingram, Batchler & Co.	Sacramento	Best sporting rifle	\$5 00
Schaw, Ingram, Batchler & Co.	Sacramento	Best breech-loading shotgun	\$5 00
Schaw, Ingram, Batchler & Co.	Sacramento	Best game bag	\$3 00
Bandman, Nelson & Co.	Sacramento	Best mining and blasting powder	Silver medal.
James A. Barwick	San Francisco	Best barometer	Diploma.
H. L. Hutchinson	San Francisco	Best thermometer	Diploma.
Upson & Toll	Sacramento	Best bicycle (Eagle)	Silver medal.
D. M. Bishopp	Sacramento	Best assortment of spectacles and eye glasses, showing different styles and shapes of frames and nose pieces	Silver medal.
D. M. Bishopp	Sacramento	Best assortment of all kinds of unfinished convex, concave, cylindrical, and plano lenses	\$5 00
D. M. Bishopp	Sacramento	Best assortment of all kinds of unfinished convex, concave, cylindrical, and plano lenses	Diploma.
CLASS VIII—CHEMICALS.			
A. S. Hopkins & Bro.	Sacramento	Best display of writing fluid	\$2 00
A. S. Hopkins & Bro.	Sacramento	Best display of blacking	\$2 00
A. S. Hopkins & Bro.	Sacramento	Best stove polish	Diploma.
A. S. Hopkins & Bro.	Sacramento	For axle grease	Special mention.
Schaw, Ingram, Batchler & Co.	Sacramento	Best glue	Silver medal.
H. C. Nichols	Ferndale	Best sample of paint, California manufacture	Diploma.
Coburn, Tevis & Co.	San Francisco	Best axle grease (Peerless brand)	Diploma.
W. H. Murray	San Francisco	Best hydraulic pressed wax candles	\$10 00
W. H. Murray	San Francisco	Best white lead, California product	\$5 00
CLASS IX—STONEWARE, BRICKS, TILES, GLASS, CROCKERY, ETC.			
A. Aitken	Sacramento	Best flooring tile	\$5 00
A. Aitken	Sacramento	Best firebricks	\$3 00
Sacramento Glass & Crockery Co.	Sacramento	Best display of table and bar glassware	Diploma and \$10 00
Sacramento Glass & Crockery Co.	Sacramento	Best display of queensware	\$5 00
Geo. Muddox	Sacramento	Best water pipe	Diploma.
Geo. Muddox	Sacramento	Best sample of drain tile	\$5 00
Geo. Muddox	Sacramento	Best sewer pipe	\$5 00
Geo. Muddox	Sacramento	Best pottery, various kinds	Silver medal.
Geo. Muddox	Sacramento	Best display of stoneware	\$10 00
Crouch & Lyman	Sacramento	Best roofing tile	\$5 00
John Wise	San Francisco	Best display of pressed bricks	Diploma.

FIFTH DEPARTMENT.

AGRICULTURAL PRODUCTS.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
CLASS I—SILK, COTTON, AND TOBACCO.			
Carlson-Currier Mfg. Co.	San Francisco.	Best general display of silks made in California.	\$25 00
Carlson-Currier Mfg. Co.	San Francisco.	Best display of thrown and twisted silk in the gum and boiled off, made in California.	\$10 00
Carlson-Currier Mfg. Co.	San Francisco.	Best display of machine spool silk, made in California.	\$10 00
Carlson-Currier Mfg. Co.	San Francisco.	Best display of knitting silk, made in California.	\$5 00
Carlson-Currier Mfg. Co.	San Francisco.	Best display of spool embroidery, made in California.	\$5 00
Carlson-Currier Mfg. Co.	San Francisco.	Best display of sken embroidery, made in California.	\$5 00
W. H. Murray	San Francisco.	Best California tobacco in leaf.	\$5 00
California Cotton Mills	Oakland.	Best four hundred pounds California cotton.	\$20 00
Lane & Connolly	San Francisco.	Best display of California manufactured tobacco and cigars.	Silver medal.
CLASS II—FLOUR AND GRAIN.			
Chas. Stuardus	Routiers.	Best sack Australian wheat.	\$10 00
W. H. Jones	Colusa.	Best forty sheaves grain.	\$40 00
W. H. Jones	Colusa.	Best display of wheat in ear or head.	\$10 00
W. H. Jones	Colusa.	Best Sonora wheat.	\$10 00
W. H. Jones	Colusa.	Best small white club wheat.	\$10 00
W. H. Jones	Colusa.	Best proper wheat.	\$10 00
A. Cusa	Camp Grant.	Best sack yellow corn.	\$5 00
John Miller.	Rohnerville.	Best sample of timothy.	\$5 00
John Miller.	Rohnerville.	Best sample of mesquite grass seed.	\$5 00
John Miller.	Rohnerville.	Best sample of orchard grass seed.	\$5 00
F. W. Oliver.	Alton.	Best sack oats.	\$5 00
Mrs. Geo. Muddox	Sacramento.	Best box garden seeds of forty varieties.	\$10 00
W. S. Shaffer	Union House.	Best sack barley.	\$5 00
Starr & Co.	San Francisco.	Best sample bakers' flour.	Silver medal.
Colusa Mills, W. H. Jones, Agt.	Colusa.	Best family flour.	\$10 00
CLASS III—VEGETABLES, ROOTS, ETC.			
F. Gabrielli.	Sacramento.	Best sack red potatoes.	\$5 00
F. Gabrielli.	Sacramento.	Best sack sweet potatoes.	\$5 00
F. Gabrielli.	Sacramento.	Best six long blood beets.	\$5 00
F. Gabrielli.	Sacramento.	Best six drumhead cabbages.	\$5 00
F. Gabrielli.	Sacramento.	Best six heads red Dutch cabbage.	\$5 00
F. Gabrielli.	Sacramento.	Best three heads cauliflower.	\$5 00
F. Gabrielli.	Sacramento.	Best three heads broccoli.	\$5 00
F. Gabrielli.	Sacramento.	Best six heads lettuce.	\$5 00
F. Gabrielli.	Sacramento.	Best six stalks celery.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck lima beans, in pods.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck white beans, dry.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck kidney bush beans, in pod.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck pole beans, other than lima, in pod.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck field peas, dry.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck garden peas, dry.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck castor beans.	\$5 00
F. Gabrielli.	Sacramento.	Best and greatest variety of peas, dry.	\$5 00
F. Gabrielli.	Sacramento.	Best half peck gherkin cucumbers.	\$5 00
F. Gabrielli.	Sacramento.	Best table collection of vegetables, exhibited by producer.	\$20 00
F. Gabrielli.	Sacramento.	Best sack white potatoes.	\$5 00
Chauncey Langdon.	Rohnerville.	Best twelve parsnips.	\$5 00
Chauncey Langdon.	Rohnerville.	Best twelve carrots.	\$5 00
Chauncey Langdon.	Rohnerville.	Best six sugar beets.	\$5 00
Chauncey Langdon.	Rohnerville.	Best half peck white onions.	\$5 00
Chauncey Langdon.	Rohnerville.	Best half peck yellow onions.	\$5 00
Bowden & Burkey.	Colusa.	Best three mountain sweet watermelons.	\$5 00
Bowden & Burkey.	Colusa.	Best three watermelons of any other variety.	\$5 00
Bowden & Burkey.	Colusa.	Best twelve roots salsify.	\$5 00
Bowden & Burkey.	Colusa.	Best six turnip beets.	\$5 00
Bowden & Burkey.	Colusa.	Best three purple eggplants.	\$5 00
Bowden & Burkey.	Colusa.	Best dozen sweet corn, green.	\$5 00
Bowden & Burkey.	Colusa.	Best six marrow squashes.	\$5 00
Bowden & Burkey.	Colusa.	Best half peck peppers for pickling.	\$5 00
Bowden & Burkey.	Colusa.	Best peck tomatoes.	\$5 00
CLASS IV—FLOWERS.			
Bel Conservatory Co.	Sacramento.	Best and largest collection of flowering plants in bloom.	\$20 00
Bel Conservatory Co.	Sacramento.	Best collection of ornamental foliage plants.	\$20 00
Bel Conservatory Co.	Sacramento.	Best display of cut flowers, to be kept fresh during the exhibition by replacing.	\$20 00
Bel Conservatory Co.	Sacramento.	Best collection of new and rare plants.	\$15 00
Bel Conservatory Co.	Sacramento.	Best display of coleus, distinct varieties.	\$15 00
Bel Conservatory Co.	Sacramento.	Best and most varied exhibit of named varieties of dahlias.	\$10 00

FIFTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
Bell Conservatory Co.	Sacramento	Best collection of roses in bloom	\$10 00
Bell Conservatory Co.	Sacramento	Best collection of fuchsias in bloom	\$10 00
Bell Conservatory Co.	Sacramento	Best collection of tuberose	\$10 00
Bell Conservatory Co.	Sacramento	Best collection of pinks	\$10 00
Bell Conservatory Co.	Sacramento	Best collection of ferns	\$15 00
Bell Conservatory Co.	Sacramento	Best display of bouquets	\$10 00
Bell Conservatory Co.	Sacramento	Best collection of plants suitable for greenhouse, conservatory, and window culture	\$15 00
Bell Conservatory Co.	Sacramento	Best display of hanging baskets, containing plants	\$10 00
CLASS V.—CHEESE.			
J. P. Vedder	Ferndale	Best cheese, one year old and over	\$15 00
J. P. Vedder	Ferndale	Best cheese, under one year	\$10 00
J. P. Vedder	Ferndale	Best and largest display of cheese	\$15 00
CLASS VI.—BUTTER, BREAD, ETC.			
Sadie Winn	Sacramento	Best domestic brown bread	\$5 00
Laura Lubin	Sacramento	Best domestic wheat bread	\$5 00
Mrs. C. H. Hull	Union House	Best display of domestic bread	\$10 00
Mrs. H. Works	San Jose	Best display of domestic bread	\$2 00
Edna Johnson	Sacramento	Best biscuit	\$2 00
Mrs. S. Conrad	Sacramento	Best rye bread	\$5 00
Mrs. P. H. Murphy	Perkins	Best graham bread	\$5 00
Mrs. M. L. Bassett	Sacramento	Best corn bread	\$5 00
Mrs. George Muddox	Sacramento	For potato bread	Special mention.
W. H. Murray	Sacramento	Best four loaves bakers' bread	Diploma.
Henry Fisher	San Francisco	Best pilot bread	\$2 00
Henry Fisher	San Francisco	Best butter crackers	Silver medal.
Henry Fisher	San Francisco	Best soda crackers	Silver medal.
Henry Fisher	San Francisco	Best Boston crackers	Silver medal.
Humboldt Creamery	San Francisco	Best display of butter in rolls, not less than forty pounds	\$20 00
A. Revenna	Humboldt	Best display of macaroni and vermicelli	Silver medal.
CLASS VII.—SUGAR, SYRUP, EXTRACTS, CONFECTIONS, AND CANDY.			
J. P. Odert	Sacramento	Best bunch cayenne pepper	\$3 00
W. L. Merry	Sacramento	Best box dried tomatoes	\$3 00
Sylvester Tryon	San Francisco	Best lard (Royal brand)	\$2 50
Mohr & Yeck	Sacramento	Best California cotton	Diploma.
Golden Gate Distilling Co.	Sacramento	Best general display of lard	\$5 00
W. B. Ewer	San Francisco	Best compressed yeast	Gold medal.
W. H. Murray	San Francisco	Best silkworm cocoons	\$3 00
W. H. Jones	San Francisco	Best display of ramie plant	Diploma.
T. B. Hall	Colusa	Best graham flour	Diploma.
T. B. Hall	Sacramento	Best condensed milk	\$2 50
T. B. Hall	Sacramento	Best condensed coffee	Diploma.
P. Lorillard	San Francisco	For tobacco (Turtle brand)	Silver medal.

SIXTH DEPARTMENT.

FRUITS, PRESERVES, WINES, ETC.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
CLASS I.—GREEN FRUITS.			
Amos Hansell & Son	Camp Grant	Best display and best variety of apples	\$25 00
J. H. Smith	Camp Grant	Second best	\$20 00
E. L. Hawk	Rocklin	Best display and best variety of pears	\$25 00
Amos Hansell & Son	Camp Grant	Second best	\$20 00
J. P. Odert	Sacramento	Third best	\$15 00
Dr. Manlove	Perkins	Fourth best	\$10 00
J. L. Stubbs	Sacramento	Fifth best	\$5 00
G. W. Threlkel	Newcastle	Best display and best variety of peaches	\$25 00
Geo. Perkins	Newcastle	Second best	\$20 00
Mrs. E. Shields	Routiers	Third best	\$15 00
J. L. Stubbs	Sacramento	Fourth best	\$10 00
J. P. Odert	Sacramento	Fifth best	\$5 00
J. L. Stubbs	Sacramento	Best display and best variety of plums	\$25 00

SIXTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
Dr. Manlove	Perkins	Second best.	\$20 00
J. P. Odert	Sacramento	Best display of green figs	\$5 00
Robt. Greer	Sacramento	Second best	\$2 50
E. L. Hawk	Rocklin	Best general display of green fruit	\$40 00
Dr. Manlove	Perkins	Second best.	\$20 00
Geo. Rich	Florin	Best box Sicily lemons	\$10 00
A. A. Krull	Sacramento	For Japanese persimmons	Special mention.
CLASS II—HONEY, PRESERVES, PICKLES, ETC.			
Mrs. F. T. Robinson	Florin	Best six jars strawberry jelly, in glass	\$3 00
Mrs. J. P. Odert	Sacramento	Best display of fruit, in glass, by other than factories	\$15 00
Mrs. J. P. Odert	Sacramento	Best display of pickles	\$10 00
Mrs. J. P. Odert	Sacramento	Best display of jams and jellies, in glass	\$3 00
Mrs. J. P. Odert	Sacramento	Best six jars black currant jelly, in glass	\$3 00
Mrs. J. P. Odert	Sacramento	Best six jars raspberry jam, in glass	\$3 00
Mrs. Geo. Muddox	Sacramento	Best six jars quince jelly, in glass	\$3 00
Mrs. Geo. Muddox	Sacramento	Best six jars blackberry jam, in glass	\$5 00
Mrs. Geo. Muddox	Sacramento	Second best display of jams and jellies, in glass	\$3 00
Mrs. Geo. Muddox	Sacramento	Best ten pounds California honey	\$3 00
C. Langdon	Rohnerville	Best six jars red currant jelly, in glass	\$3 00
C. Langdon	Rohnerville	Best six jars blackberry jelly, in glass	\$3 00
CLASS III—DRIED AND PRESERVED FRUIT, NUTS, ETC.			
E. J. Clanton	Woodland	Best ten pounds dried pears	\$5 00
J. P. Odert	Sacramento	Best ten pounds dried apples	\$5 00
E. B. Beecher	Auburn	Best ten pounds bleached figs	\$10 00
E. B. Beecher	Auburn	Best ten pounds unbleached figs	\$5 00
Amos Hansell & Son	Camp Grant	Best ten pounds dried raspberries	\$5 00
Mrs. E. Shields	Routiers	Best four kinds prunes	\$10 00
Cotton, Bell & Co.	Sacramento	Best wash for destroying scale insects on fruit trees	Silver medal.
Robert Greer	Sacramento	Best display of soft-shell almonds	\$10 00
Robert Greer	Sacramento	Best general display of dried fruits	\$20 00
Robert Greer	Sacramento	Second best display of dried fruits	\$10 00
Robert Greer	Sacramento	Second best display of almonds	Special mention.
Robert Greer	Sacramento	Best six varieties table grapes, not less than three bunches each	\$15 00
E. L. Hawk	Rocklin	Second best	\$7 50
James Davis	Rocklin	Best three varieties table grapes, not less than three bunches each	\$10 00
Joseph Sims	Rocklin	Best best	\$5 00
P. H. Murphy	Union House	Best variety table grapes	\$5 00
Jos. Sims	Perkins	Second best	\$2 00
Robt. Greer	Union House	Best six varieties wine grapes, not less than three bunches each	\$15 00
Jos. Sims	Sacramento	Best three varieties wine grapes, not less than three bunches each	\$10 00
E. L. Hawk	Union House	Best variety wine grapes, not less than three bunches	\$5 00
Dr. Manlove	Rocklin	Second best	\$2 00
E. L. Hawk	Perkins	Best general display of grapes by producer	\$25 00
Natoma Vineyard	Rocklin	Second best	\$15 00
Natoma Vineyard	Natoma	For wine grapes	Special mention.
CLASS V—BRANDIES AND WINES.			
H. W. Crabb	Oakville	Best general display of California brandies and wines	\$100 00
H. W. Crabb	Oakville	Best grape brandy, three years old or over	\$20 00
H. W. Crabb	Oakville	Best white wine, two years old or over	\$10 00
H. W. Crabb	Oakville	Best claret wine, three years old or over, not less than one dozen bottles	\$20 00
H. W. Crabb	Oakville	Best claret wine, two years old	\$20 00
Chas. A. Wetmore	San Francisco	Best Sauterne	\$10 00
Chas. A. Wetmore	San Francisco	Best sweet wine, not less than one dozen bottles	Silver medal.
H. W. Crabb	San Francisco	Best Cal. port, two years old or over, not less than one dozen bottles	\$20 00
H. W. Crabb	Oakville	Best California sherry, one year old	\$15 00
A. Fink's widow	San Francisco	Best California champagne	\$15 00
A. Fink's widow	San Francisco	For wine grapes	Silver medal.
CLASS VI—BEER.			
Buffalo Brewing Co.	Sacramento	Best lager beer	Gold medal.
Buffalo Brewing Co.	Sacramento	Best export beer	Gold medal.
CLASS VII—MISCELLANEOUS.			
H. W. Crabb	Oakville	Best blackberry (cordial) brandy	\$2 50
Mt. Shasta Mineral Spring Co.	Oakville	Best case mineral water	Diploma.
Mt. Shasta Mineral Spring Co.	Oakville	Best case sarsaparilla and iron	Diploma.
Isaac Lea	Florin	For soft-shell almonds	\$3 00
Jos. Sims	Union House	Special display of pomegranates	\$3 00
J. Hamilton	Sacramento	Best display of millet grass	\$3 00
Mrs. E. Robertson	Auburn	Best display of olive oil	\$5 00
Mrs. J. P. Odert	Sacramento	Five bottles blackberry cordial	\$5 00
Mrs. Belle Muddox	Sacramento	Thirty-four bottles berry and vegetable wine	\$5 00
S. Martinelli	Watsonville	Best apple cider	Silver medal.
W. H. Jones	Colusa	Best display of honey vinegar	\$3 00

SIXTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
W. H. Jones.....	Colusa.....	Best glutena.....	\$5 00
W. H. Jones.....	Colusa.....	Best display of horse hair.....	\$3 00
W. H. Jones.....	Colusa.....	Best display of canned fruits.....	Diploma.
Bartlett Springs Co.....	Colusa.....	Best display of mineral water.....	Diploma.

SEVENTH DEPARTMENT.

FINE ARTS.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
CLASS I—OIL PAINTINGS, WATER COLORS, CRAYONS, ETC.			
Addie L. Ballou.....	San Francisco.....	Thirteen oil paintings.....	\$20 00
Miss M. K. Irving.....	Colfax.....	Ten oil paintings.....	\$20 00
Miss Leonora Lies.....	San Francisco.....	One oil painting.....	\$10 00
H. B. Maxfield.....	San Francisco.....	Twenty oil paintings, water colors, and pastels.....	\$15 00
Mrs. H. O. Briggs.....	Sacramento.....	Thirteen oil and water color paintings.....	\$15 00
M. Straus.....	San Francisco.....	Sixteen oil paintings.....	\$25 00
Wm. Keith.....	San Francisco.....	Best still life in flowers and fruit.....	Silver medal.
W. A. Coulter.....	San Francisco.....	Four oil paintings.....	\$45 00
W. A. Coulter.....	San Francisco.....	Three oil paintings.....	\$30 00
Norton. Bush.....	San Francisco.....	Best marine painting.....	Silver medal.
Lee Leach.....	San Francisco.....	Thirteen oil paintings.....	\$25 00
Lee Leach.....	San Francisco.....	Nine oil paintings.....	\$25 00
Lee Leach.....	San Francisco.....	Best portrait of human figure.....	Silver medal.
Alice M. Ottenden.....	San Francisco.....	Four oils and pastels.....	\$20 00
Thomas Hill.....	San Francisco.....	One oil painting.....	\$15 00
F. L. Heath.....	San Francisco.....	Eight oil paintings.....	Gold medal and \$45 00
O. Kunath.....	Santa Cruz.....	Six oil paintings and pastels.....	\$35 00
S. M. Farnam.....	Oakland.....	One oil and one water color.....	Silver medal and \$30 00
E. Narjot.....	San Francisco.....	Three oil paintings.....	\$10 00
Miss Eva Withrow.....	San Francisco.....	Five oil paintings.....	\$20 00
H. H. Boynton.....	San Francisco.....	Two oil paintings.....	\$30 00
C. J. Adams.....	Chico.....	One oil and one crayon painting.....	\$10 00
Miss May Bailey.....	Sacramento.....	One oil painting.....	\$5 00
Mrs. George D. Stewart.....	San Francisco.....	One oil painting.....	\$10 00
Susan Scoute.....	Sacramento.....	Fifteen oil, water color, and crayon drawings.....	\$5 00
Hugo Fisher.....	San Francisco.....	Eleven water color and oil paintings.....	\$15 00
S. B. Gamble.....	San Francisco.....	Three water color paintings.....	\$25 00
George Boedewig.....	San Francisco.....	One pastel painting.....	\$15 00
Stanley Inghold.....	San Francisco.....	Eight pastels and water colors.....	\$25 00
Chris. Jorgensen.....	San Francisco.....	Nineteen oil paintings.....	\$25 00
Isabella Sola.....	San Francisco.....	Eighteen water colors.....	\$30 00
Mrs. S. C. Kendall.....	San Francisco.....	Eight oils, water colors, and pastels.....	Silver medal and \$30 00
J. Goldman.....	Humboldt.....	Paintings.....	\$15 00
J. Goldman.....	San Francisco.....	Paintings.....	Spec. premium, \$20 00
AMATEURS' GALLERY.			
Miss Neva Young.....	Sacramento.....	Two oil paintings.....	\$5 00
Miss L. M. Carpenter.....	San Francisco.....	Five oil paintings.....	\$10 00
K. Takahashi.....	San Francisco.....	Eight oils and water colors.....	Silver medal and \$15 00
Mrs. J. W. Johnson.....	Sacramento.....	Four oil paintings.....	\$5 00
C. M. Estes.....	Sacramento.....	Three oil paintings.....	\$5 00
Miss F. McClatchy.....	Sacramento.....	Four water colors.....	\$10 00
M. Froelich.....	San Francisco.....	Six oil paintings.....	\$10 00
Paul Menagoena.....	San Francisco.....	Five oil and crayon drawings.....	\$10 00
K. W. Wadsworth.....	Sacramento.....	Two oil paintings.....	\$5 00
M. Jones.....	San Francisco.....	Eight oils and water colors.....	\$5 00
R. V. Davis.....	San Francisco.....	Two crayons.....	\$10 00
Evangeline Ballou.....	San Francisco.....	Six oils and water colors.....	\$5 00
L. F. Reeves.....	Ukiah.....	One oil painting and six paintings on California woods.....	\$5 00
CLASS II—PHOTOGRAPHS.			
I. W. Taber.....	San Francisco.....	Best photographs.....	Silver medal and \$20 00
George W. Stewart.....	Sacramento.....	Best display of landscape photography.....	\$10 00
A. O. Gregory.....	Sacramento.....	Best display of photographic pictures.....	\$20 00

SEVENTH DEPARTMENT—Continued.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
CLASS III—ETCHINGS AND DRAWINGS.			
Sacramento Business College	Sacramento	Two pieces pen drawing	\$5 00
L. Roethe	San Francisco	Twenty-four pencil drawings	Silver medal and \$20 00
M. Cashman	San Francisco	Twelve pencil drawings	\$5 00
J. MacIlroy	San Francisco	Six pencil drawings	\$5 00
L. Liles	San Francisco	Ten pen and ink drawings	\$5 00
Mrs. R. V. Davis	San Francisco	Three frames pencil drawings	\$10 00
CLASS IV—STATUARY, ETC.			
Carlaw Bros.	Sacramento	One granite statue	\$20 00
F. Flohr	San Francisco	Eight busts and medallion	\$15 00
F. Happenberger	San Francisco	Six pieces statuary designs	\$30 00
C. S. Newell	Berkeley	Two pieces statuary designs	Silver medal and \$35 00
CLASS V—PENMANSHIP.			
Sacramento Business College	Sacramento	Best display of plain and ornamental penmanship	Silver medal.
C. E. Webber	Sacramento	Best single sample of penmanship, the work of the exhibitor	\$5 00
CLASS VI—JUVENILE.			
Warren E. Murray	San Francisco	Best drawing by a minor	\$5 00
Sacramento Primary School	Sacramento	Best display of primary work	Silver medal.
Milton Davis	San Francisco	For one map drawing	Special mention.
Estella M. Stewart	Sacramento	For one map drawing	Special mention.
CLASS VII—CALIFORNIA DRAWINGS AND DESIGNS.			
Warren E. Murray	San Francisco	Best original design of an engine, or machinery of any kind, accompanied by complete detail working drawings, from which the same might be constructed	Silver medal.
Union Iron Works	San Francisco	Best original mechanical drawings of any kind	Silver medal.
Warren E. Murray	San Francisco	Best mechanical and freehand drawing	Silver medal.
Sacramento Grammar School	Sacramento	Best display of drawings	\$20 00
O. J. Fox	Sacramento	Best plan and design of city residence	Silver medal.

COUNTY EXHIBITS.

EXHIBITOR.	Address.	Articles Exhibited.	Award.
A. A. Krull	Sacramento	Sacramento County exhibit	\$500 00
Robert Cosner	Colusa	Colusa County exhibit	\$450 00
C. Langdon	Reherville	Humboldt County exhibit	\$350 00
W. M. Lee	Yolo	Yolo County exhibit	\$300 00

DEPARTMENT GOLD MEDALS.

FIRST DEPARTMENT.

To M. Salsbury, Pleasanton, for most meritorious exhibit of horses.
To Heilbron Bros., Sacramento, for live stock other than horses.

SECOND DEPARTMENT.

To Daniel Best, San Leandro, for best agricultural machinery and plows.

THIRD DEPARTMENT.

To Mrs. M. H. Ober, San Francisco, for best exhibit of textile fabrics.

FOURTH DEPARTMENT.

To Schaw, Ingram, Batcher & Co., for best display of mechanical products.

FIFTH DEPARTMENT.

To Mohr & Yoerk, Sacramento, for best exhibit in agricultural products.

SIXTH DEPARTMENT.

To Mrs. J. P. Odbert, Sacramento, for best exhibit of fruits.

SEVENTH DEPARTMENT.

To Thomas Hill, San Francisco, for best exhibit in fine arts.

FOR THE MOST ATTRACTIVE DISPLAY.

To Ingram & Bird, Sacramento, furniture and carpets.

SPECIAL.

To Buffalo Brewing Co., of Sacramento, for best "export" and "lager" beer.

SPEED PROGRAMME—STATE FAIR MEETING, 1890.

THURSDAY, SEPTEMBER 11, 1890.

RACE No. 1—TROTTING.

The Occident Stake. A trotting stake for foals of 1887. Entries closed January 1, 1888. Entrance one hundred dollars, of which ten dollars must accompany nomination; fifteen dollars to be paid January 1, 1889; twenty-five dollars January 1, 1890, and fifty dollars thirty days before the race. The Occident Gold Cup, of the value of four hundred dollars, to be added by the Society. First colt, cup and six tenths; second colt, three tenths; and third colt, one tenth of stake. Five to enter, three to start; otherwise, National Trotting Association Rules. Mile heats, three in five, to harness. Closed in 1888 with thirty-three nominations. Value of stake January 1, 1890, one thousand eight hundred and thirty-five dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
ral, b. f., by Electioneer; dam, Columbine, by A. W. Richmond	Palo Alto Stock Farm	Menlo Park.
oss Rose, b. f., by Anteeo; dam, Luella, by Nutwood	Lot D. Slocum	San Francisco.

SUMMARY.

Coral (Havey)..... 1 1 1
Moss Rose (Bennett)..... 2 2 2

Time—2:39½; 2:28; 2:25.

RACE No. 2—TROTTING.

Substitution for 2:22 Class. Purse of one thousand two hundred dollars, in which the following named horses will be eligible, and such others whose records are not better than 3: Mary Lou, Wanda, Redwood, Pink, Guido, Oaknut, Argent, Nona Y, Larco, and Victor.

Name and Pedigree of Horse.	By Whom Entered.	Address.
dywell, blk. m., by Electioneer; dam, Lady Lowell	Palo Alto Stock Farm	Menlo Park.
gent, g. g., by Brown Jug; by Gen. Taylor	P. Johnson	Sacramento.
lette, b. m., by Dave Hill, Jr.; unknown	T. C. Snider	Sacramento.

SUMMARY.

Ladywell (Havey)..... 2 1 1 1
Sargent (Johnson)..... 1 2 2 2
Vidette (J. A. Goldsmith)..... 3 3 3 3

Time—2:31½; 2:25; 2:20½; 2:31.

RACE No. 3—PACING.

2:30 Class. Purse, eight hundred dollars. Mile heats, three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rupee, br. h., by Guy Wilkes; dam, Sable Hayward	San Mateo Stock Farm	San Mateo
Princess Alice, blk. m., by Dexter Prince; dam, Mollie, by General McClellan	John Patterson	Carson, N.
Our Dick, b. g., by Gibraltar; dam, Mattie W. Hummer, ch. g., by Sidney; dam, Humming Bird	H. Willis	Carson, N.
C W G, ch. pinto g., by Adonis; dam, inbred St. Clair	John Garrity	San Francisco
Costillo, blk. s., by Echo; dam, Bessie Turner, by Fred Low	C. W. Goddard	Sacramento
	S. C. Tryon	Sacramento

SUMMARY.

Rupee (Goldsmith)	1 1
Princess Alice (Kenier)	2 2
Our Dick (Willis)	3 4
Hummer (Garrity)	4 3
C W G (Smith)	dis.
Costillo (McConnell)	dis.

Time—2:18½; 2:19; 2:20½.

FRIDAY, SEPTEMBER 12, 1890.

RACE No. 4—RUNNING.

Opening scramble for two-year olds. A sweepstake of twenty-five dollars each, with four hundred dollars added, of which fifty dollars to second. Winners at the race in 1890, once, to carry three pounds; twice, five pounds extra. Maidens at five pounds. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Fairy, b. f., by Argyle; dam, imp. Fairy Rose, by Kisber	L. J. Rose	Los Angeles
Nero, b. c., by Flood; dam, imp. Queen Bess, by Strathconan	Palo Alto Stock Farm	Menlo Park

SUMMARY.

Fairy (Burrell)	1
Nero (Harris)	2

Time—1:15½.

RACE No. 5—RUNNING.

The California Breeders' Stake. A sweepstake for three-year olds (foals of 1887); one hundred dollars each, h. f., or only ten dollars if declared January first; fifteen dollars if declared August 1, 1890; declarations void unless accompanied by the money; with six hundred dollars added; of which one hundred and fifty dollars to second; one hundred dollars to third. Winner of any stake race in 1890 of the value of one thousand dollars to carry five pounds; of two or more, ten pounds extra. Maidens allowed five pounds. One mile and a quarter. Closed in 1888 with thirty-nine nominations.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mabel F, b. f., by Longfellow; dam, Carrie Phillips	L. U. Shippee	Stockton.
Initiation, b. f., by Inauguration; dam, Brown Maria	Charles T. Boots	Milpitas.

SUMMARY.

Mabel F (Morton)	1
Initiation (Casey)	2

Time—2:11½.

RACE No. 6—RUNNING.

The Rosemeade Handicap. For all ages; fifty dollars each, h. f.; fifteen dollars declared; with four hundred dollars added; second to receive one hundred dollars, and third fifty dollars from the stakes. One mile and an eighth.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Tycoon, ch. g., by Reveille; dam, Margery, by Error	Undine Stables	Stockton.
Picnic, br. m., by imp. Mr. Pickwick; dam, Pop. Countess	L. U. Shippee	Stockton.
Men, ch. m., by Wildidle; dam, Nettie Brown	W. L. Appleby	Santa Clara.
Alfarata, br. m., by Wildidle; dam, Mary Stevens, by Owen Dale	O. Appleby	San José.
Al, b. c., by Monday; dam, Precious, by Ever	Palo Alto Stock Farm	Menlo Park.
Lurline, ch. m., by Longfield; dam, Katy Chase, by Planet	Matt. Storn	Sacramento.

SUMMARY.

Tycoon (McIntosh)	1
Picnic (Morton)	2
Carmen (Appleby)	3
Alfarata (Murphy)	0
Peel (Burrell)	0
Lurline (Cook)	0

Time—1:55.

RACE No. 7—RUNNING.

Selling purse, three hundred dollars; of which fifty dollars to second; for horses entered to be sold for one thousand five hundred dollars to carry rule two pounds allowed for each one hundred dollars less, down to one thousand then one pound for each one hundred dollars less, down to five hundred dollars entered not to be sold to carry five pounds above the scale. Mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Applause, b. g., by Three Cheers; dam, Alice N, by Norfolk.	Wesley George	San Jose
Wild Oats, b. g., by Wildidle; dam, Mary Givens, by Owen Dale.	W. L. Appleby	San Jose
Installation, br. m., by Inauguration; dam, Brown Maria.	Elmwood Stables	San Jose
Larghetto, ch. s., by Jils Johnson; dam, Leveret, by Lever.	Matt. Storn	Sacramento
Forester, ch. g., by Joe Hooker; dam, Mattie C, by Specter.	C. Holloway	Sacramento
Albatross, b. g., by Pill Box; dam, Della Walker, by Jimmy Glen.	M. T. Walters	Sacramento

SUMMARY.

Applause (Murphy)	1
Wild Oats (Baxter)	3
Installation (Cota)	2
Larghetto (Roach)	4
Forester (Morton)	5
Albatross (Madden)	6

Time—1:43; 1:43½.

SATURDAY, SEPTEMBER 13, 1890.

RACE No. 8—TROTTING.

Two-year Old Stake. Entrance, fifty dollars; of which ten dollars must accompany nomination; fifteen dollars payable July first, and remaining twenty-five dollars payable August 10, 1890; three hundred dollars added by the Society. Closed March with fourteen nominations. Mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Vida Wilkes, ch. f., by Guy Wilkes; dam, Vixen, by Nutwood.	San Mateo Stock Farm	San Mateo
Starlight, ch. f., by Dawn; dam, Lena Bowles, by Ethan Allen.	B. E. Harris	San Mateo

SUMMARY.

Vida Wilkes (Goldsmith)	1
Starlight (Hecox)	2

Time—2:42½; 2:31½.

RACE No. 9—SUBSTITUTE FOR PACIFIC STALLION STAKE.

For named horses. Purse, eight hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Beary Mc, b. g., by Nephew; dam, by Alexander.	Percy Williams	Stockton.
Wanda, b. m., by Eros; dam, Accident, by Elmo.	La Siesta Ranch	Menlo Park.
ry Lou, ch. m., by Tom Benton; dam, Brown.	J. L. McCord	Sacramento.
ennie	B. C. Holly	Vallejo.
k, ch. m., by Inca; dam, by Echo.		

SUMMARY.

Beary Mc (Goldsmith)	1	4	1	1
Wanda (Viojet)	2	1	3	2
Mary Lou (McCord)	3	2	2	3
Pink (Holly)	4	3	dis.	

Time—2:19½; 2:22; 2:24; 2:24.

RACE No. 10—TROTTING.

30 Class. Purse, one thousand dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Frank M, ch. g., by Priam; dam, by General.	T. E Keating	Sacramento.
Wanda	De Turk & McGraw	Santa Rosa.
Skinner, blk. s., by Alcona, Jr.; dam, Montana, by Almont.	San Miguel Stock Farm	San Francisco.
Kan, br. h., by Mambrino Wilkes; dam, Fanny Fern.	Geo. W. Theurerkauf	Gonzales.
ch. g., by General Lee, by George M. Latchen; dam, Sister Taylor mare.		

SUMMARY.

Frank M (Keating)	2	2	1	1	1
Silas Skinner (McGraw)	1	1	2	3	2
Balkan (Goldsmith)	4	4	3	2	4
Lee (Dustin)	3	3	4	4	3

Time—2:20; 2:19; 2:21; 2:26; 2:23.

MONDAY, SEPTEMBER 15, 1890.

RACE No. 11—RUNNING.

The Daisy D Stake. For all ages; of fifty dollars each, h. f., or only fifteen dollars declared on or before September first, with three hundred and fifty dollars added; which seventy-five dollars to second; third to save stake. Maidens, if three years old, and five pounds; if four or more, seven pounds. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
aim, b. f., by Three Cheers; dam, Rosette.	G. H. Kennedy	Santa Rosa.
men, ch. m., by Wildidle; dam, Nettie.	W. L. Appleby	Santa Clara.
own	E. Pickett	Elk Grove.
grine, ch. h., by Jumbo or Joe Hooker;	Owen Bros.	Fresno.
m, Irene Harding	L. U. Shippee	Stockton.
y D, b. m., by Wheatly; dam, Black Maria, Belmont.		
ic, br. m., by imp. Mr. Pickwick; dam, Antess.		

SUMMARY.

Acclaim (Roach)
 Carmen (Murphy)
 Peregrine (Leonard)
 Daisy D (Hennessy)
 Picnic (Morton)

Time—1:16½.

RACE No. 12—RUNNING.

The Capital City Stake. A handicap for three-year olds; of one hundred dollars each, h. f.; twenty dollars declaration; with four hundred dollars added; second hundred dollars. One mile and a sixteenth.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Marigold, ch. f., by Milner; dam, Katy Pease, by Planet	Matt. Storn	San Jose.
Take Notice, b. c., by Prince Charlie; dam, Nota Bene	L. U. Shippee	San Jose.
Rico, b. g., by Shannon; dam, Fanny Lewis	L. J. Rose	Los Angeles.
Captain Al, br. s., by Kingston; dam, Black Maria, by Belmont	Owen Bros.	San Jose.
Raindrop, b. f., by Wildidle; dam, imp. Tear-drop	W. L. Appleby	San Jose.

SUMMARY.

Marigold (Cook)
 Take Notice (Morton)
 Rico (Burrell)
 Captain Al (Hennessy)
 Raindrop (Murphy)

Time—1:49½.

RACE No. 13—RUNNING.

The Sunny Slope Stake. A sweepstake for two-year old fillies (foals of 1889) dollars each, h. f., or only ten dollars if declared on or before January first, or fillies by May 1, 1890; declarations without money are void; with three hundred dollars added; of which fifty dollars to second. Non-winners allowed five pounds eighths of a mile. Closed in 1889 with twenty nominations.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Fairy, b. f., by Argyle; dam, imp. Fairy Rose, by Kisber	L. J. Rose	Los Angeles.
Tearless, ch. f., by Wildidle; dam, imp. Tear-drop	Palo Alto Stock Farm	Menlo Park.
Mystery, b. f., by Three Cheers; dam, Mistake, by Wildidle	J. B. Chase	San Jose.

SUMMARY.

Fairy (Burrell)
 Tearless (Roach)
 Mystery (Morton)

Time—1:01½.

RACE No. 14—RUNNING.

Selling purse, three hundred and fifty dollars; of which fifty dollars to second. For three-year olds. Horses entered to be sold for two thousand dollars to carry rule weights; one pound off for each one hundred dollars down to one thousand dollars; then two pounds off for each one hundred dollars down to five hundred dollars. Horses entered not to be sold to carry five pounds above the scale. One and one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Applause, b. g., by Three Cheers; dam, Alice N. Nerva, ch. m., by Bob Wooding; dam, Lizzie Marshall	Wesley George	San Jose.
Kildare, ch. g., by Kyrie Daly; dam, Mistake	Elmwood Stables	Milpitas.
Wild Oats, b. g., by Wildidle; dam, Mary Givens	Matt. Storn	Sacramento.
Albatross, b. g., by Pill Box; dam, Della Walker, by Jimmy Glen	W. L. Appleby	Santa Clara.
Mohawk, b. s., by Norfolk; dam, Irene Harding	M. T. Walters	Sacramento.
	Dennison Bros.	Sacramento.

SUMMARY.

Applause (Murphy) 1
 Nerva (Madden) 2
 Kildare (Cook) 3
 Wild Oats (Baxter) 0
 Albatross (Cooper) 0
 Mohawk (D. Dennison) 0

Time—1:56½.

TUESDAY, SEPTEMBER 16, 1890.

RACE No. 15—TROTTING.

For three-year olds eligible to 2:40 Class. Purse, six hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lottery Ticket, b. s., by Dexter Prince; dam, by Nutwood	L. Funk	Stockton.
Millie Wilkes, b. m., by Guy Wilkes; dam, Josetta, by The Moor	San Mateo Stock Farm	San Mateo.
Lynette, b. m., by Lynwood; dam, Lady Belle	U. S. Gregory	Ione.
Frank B, b. s., by Colligny; dam, Casserly mare	Tietjens & Watson	Sacramento.

SUMMARY.

Lottery Ticket (Dustin) 1 1 1
 Millie Wilkes (Goldsmith) 3 2 2
 Lynette (Ober) 2 3 3
 Frank B (McConnell) dis.

Time—2:30; 2:31½; 2:32½.

RACE No. 16—TROTTING.

For four-year olds eligible to 2:30 Class. Purse, eight hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Washington, b. s., by Mambrino Chief; dam, Fannie Rose	Thos. Smith	Vallejo.
Areola, b. m., by Benefit; dam, Laura C, by Electioneer	Palo Alto Stock Farm	Menlo Park.

SUMMARY.

Geo. Washington (Thos. Smith)..... 1 1
 Laureola (Havey)..... 2 2

Time—2:30½; 2:37½; 2:32½.

SPECIAL PACING.

Purse, six hundred dollars. For named horses.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Hummer, ch. g., by Sidney; dam, Humming Bird	J. Garrity	San Francisco
Ned Winslow, blk. g., by Tom Benton; dam, Brown Jennie	J. L. McCord	Sacramento
Thos. Ryder, br. g., by Alex. Button; dam, by Black Ralph	R. H. Newton	Woodland
Belle Button, br. m., by Alex. Button; dam, Flora	G. W. Woodard	San Francisco
Sunrise, ch. m., by Regent; dam, Hambletonian mare	J. Landregan	San Francisco

SUMMARY.

Hummer (Goldsmith)..... 1 1
 Ned Winslow (McCord)..... 3 2
 Thos. Ryder (Keating)..... 2 5
 Belle Button (Bigelow)..... 4 3
 Sunrise (McConnell)..... 5 4

Time—2:20½; 2:20; 2:18½.

RACE No. 17—TROTTING.

3:00 Class. Purse, one thousand dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Vic H, br. m., by Blackbird; dam, Ellen Swigert	D. M. Reavis	San Francisco
Charles Derby, br. s., by Steinway; dam, Katy G	B. C. Holly	San Francisco
Una Wilkes, by Guy Wilkes; dam, Blanche, by Artherton	San Mateo St'k Farm	San Francisco
Free Coinage, b. g., by Abbotsford; dam, Agnes	Pete Brandow	San Francisco

SUMMARY.

Vic H (McDowell)..... 1 1
 Charles Derby (Holly)..... 3 2
 Una Wilkes (Goldsmith)..... 2 3
 Free Coinage (Brandow)..... dis.

Time—2:22½; 2:23; 2:21½.

WEDNESDAY, SEPTEMBER 17, 1890.

RACE No. 18—RUNNING.

The California Autumn Stake. A sweepstake for two-year olds (foals of 1888); fifty dollars each, h. f., or only ten dollars if declared on or before January first; or fifteen dollars by May 1, 1890; declarations void unless accompanied by the money; with five hundred dollars added; of which one hundred to second; third to save stake. Winner any stake race to carry three pounds; of two or more, five pounds. Maidens allowed five pounds. Three quarters of a mile. Closed in 1889 with thirty-three nominations.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Fairy, b. f., by Argyle; dam, imp. Fairy Rose, by Kisher	L. J. Rose	Los Angeles.
Lodowic, b. c., by Longfellow; dam, Carrie Phillips	L. U. Shippee	Stockton.
Cheerful, b. f., by Three Cheers; dam, Queen Emma, by Woodburn	Fashion Stables	Pleasanton.
Altus, for. Lakeview, b. c., by Billy Bolinger; dam, Della Walker	M. T. Walters	Sacramento.

SUMMARY.

Fairy (Burrell)..... 1
 Lodowic (Morton)..... 2
 Cheerful (Cook)..... 3
 Altus (Cooper)..... 0

Time—1:16½.

RACE No. 19—RUNNING.

The Fall Stake. A handicap sweepstake for all ages; of fifty dollars each, h. f.; fifteen dollars declaration; with five hundred dollars added; second to receive one hundred dollars, and third, fifty dollars from the stakes. One mile and a quarter.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Peel, b. c., by Monday; dam, Precious, by never	Palo Alto Stock Farm	Menlo Park.
Applause, b. g., by Three Cheers; dam, Alice, by Norfolk	Wesley George	San José.
Carmen, ch. m., by Wildidle; dam, imp. Nettie Brown	W. L. Appleby	Santa Clara.
Lurline, by Longfield; dam, Katy Pease, by Planet	Matt. Storn	Sacramento.
Picnic, br. m., by imp. Mr. Pickwick; dam, Countess	L. U. Shippee	Stockton.
Tycoon, ch. g., by Reveille; dam, Margery, by error	Undine Stables	Stockton.

SUMMARY.

Peel (Burrell)..... 1
 Applause (Casey)..... 2
 Carmen (Murphy)..... 3
 Lurline (Cook)..... 0
 Picnic (Morton)..... 0
 Tycoon (McConnell)..... 0

Time—2:09.

RACE No. 20—RUNNING.

The Palo Alto Stake. A handicap for two-year olds; of fifty dollars each, h. f. dollars declaration; with three hundred and fifty dollars added; second to start. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Conrad, b. c., by Flood; dam, imp. Goula, by Exminster	L. J. Rose	Los Angeles
Duke of Milpitas, b. c., by Duke of Norfolk; dam, Gypsy	Elmwood Stables	Los Angeles

SUMMARY.

Conrad (Burrell).....
Duke of Milpitas (Ross).....

Time—1:16.

RACE No. 21—RUNNING.

Purse, four hundred dollars. For three-year olds and upwards; fifteen dollars starters to go to second horse. Winners at this distance in 1890 to carry, if one pound; twice, five pounds extra. Horses that have started twice in a race once over and not won, in 1890, allowed five pounds. Maidens allowed, if three years or over, seven pounds; if four, ten pounds; if five years or upwards, fifteen pounds.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Take Notice, b. c., by Prince Charlie; dam, Nota Bene	L. U. Shippee	Los Angeles
Jackson, b. s., by Luke Blackburn; dam, Ivy Leaf	Charles Kerr	San Francisco
Alfarata, br. m., by Wildidle; dam, Mary Givens	O. Appleby	San Francisco
Captain Al, br. s., by Kingston; dam, Black Maria	Owen Bros.	San Francisco
Initiation, b. f., by Inauguration; dam, Brown Maria	Elmwood Stables	Los Angeles
Leland, b. c., by Flood; dam, Amelia, by Lowlander	W. M. Murry	San Francisco

SUMMARY.

Take Notice (Morton).....
Jackson (Casey).....
Alfarata (W. Appleby).....
Captain Al (Hennessy).....
Initiation (Madden).....
Leland (J. Appleby).....

Time—1:42½.

RACE No. 22—RUNNING.

Free purse, three hundred dollars; of which fifty dollars to second. For all ages. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Olette, ch. m., by Shiloh; dam, Margery, by Error	W. L. Appleby	Santa Clara.
Daisy D, b. m., by Wheatly; dam, Black Maria	Owen Bros.	Fresno.
Go, b. g., by Shannon; dam, Fannie Lewis	L. J. Rose	Los Angeles.
Peregrine, ch. h., by Jumbo or Joe Hooker; dam, Irene Harding, by Jack Malone	E. Pickett	Elk Grove.
Jackson, b. s., by Luke Blackburn; dam, Ivy Leaf	Chas. Kerr	Sacramento.
Fanny F, b. m., by Wildidle; dam, Sally Hart	J. H. Muse	San Francisco.
Juanita, b. f., by Wildidle; dam, Monday filly	W. L. Appleby	Santa Clara.

SUMMARY.

Olette (Murphy)..... 1
Daisy D (Hennessy)..... 2
Rico (Burrell)..... 3
Peregrine (Leonard)..... 0
Jackson (O'Brien)..... 0
Fanny F (Courtney)..... 0
Juanita (Baxter)..... 0

Time—1:42.

THURSDAY, SEPTEMBER 18, 1890.

RACE No. 23—PACING.

Pacing Stake. For two-year olds; of fifty dollars each; twenty-five dollars to accompany nomination; twenty-five dollars payable by 6 P. M. day before the race; two hundred and fifty dollars added. Stakes and added money divided, 60, 30, and 10 per cent. Three heats. [Failed to fill.]

SPECIAL TROTTING.

Purse, five hundred dollars. For named horses.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mattie P, b. m., by Jackson Temple; dam, by T. Hyer, Jr.	D. R. Mizner	Petaluma.
And H, ch. m., by Carr's Mambrino; dam, by Dan Voorhies	J. Cochrane	Salinas.
Rockwood, b. g., by Weatherhead's Woodnut; dam, by Washingtonian	C. H. Corey	San José.
Laura Z, br. m., by Alex. Button; unknown	G. W. Woodard	Yolo.
Whalebone, b. s., by Inca; dam, by John Nelson	D. Dennison	Sacramento.

SUMMARY.

Mattie P (Mizner)..... 4 1 1 1
Maud H (Goldsmith)..... 1 2 2 2
Rockwood (Corey)..... 2 3 3 4
Laura Z (Bigelow)..... 3 4 4 3
Whalebone (Dennison)..... 5 5 5 5

Time—2:32½; 2:27½; 2:30½; 2:30.

RACE No. 24—TROTTING.

2:24 Class. Purse, one thousand two hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sister V, b. m., by Sidney; dam, Nettie Lambert, by John Nelson.	San Mateo Stock Farm.	San Mateo
Mary Lou, ch. m., by Tom Benton; dam, Brown Jennie, by Dave Hill, Jr.	J. L. McCord.	Sacramento
Wanda, b. m., by Eros; dam, Accident, by Elmo.	La Siesta Ranch.	Merced
Nona Y, b. m., by Admiral; dam, Black Flora.	Napa Stock Farm.	San Francisco

SUMMARY.

Sister V (Goldsmith)	1 1
Mary Lou (Dustin)	2 2
Wanda (Viojet)	3 3
Nona Y (David)	4 4

Time—2:19½; 2:21½; 2:21.

RACE No. 25—PACING.

Free for all. Purse, one thousand dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Almont Patchen, br. s., by Juanito; dam Glidey	Corey & Hanks.	Bakersfield
Ned Winslow, blk. g., by Tom Benton; dam, Brown Jennie.	J. L. McCord.	Sacramento
Belle Button, br. m., by Alex. Button; dam, Flora.	G. W. Woodard.	Placerville
Cricket, b. m., by Steinway; dam, by Dolphin.	Pleas'n Stock Farm Co.	Placerville

SUMMARY.

Almont Patchen (Corey)	1 1
Ned Winslow (Dustin)	2 2
Belle Button (Bigelow)	3 3
Cricket (McDowell)	dis.

Time—2:16½; 2:20½; 2:28.

SPECIAL TROTTING.

Sacramento Yearling Colt Stake. Dash of one mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Kebir, b. c., by Alcazar; dam, Yerba Santa, by Santa Claus.	W. F. Smith.	Sacramento
Albert, blk. c., by Albert W; dam, by Hack's Tecumseh.	W. J. O'Brien.	Sacramento
Hickory Nut, ch. c., by Ross S; dam, Jack Nelson mare.	E. Pickett.	Elgin

SUMMARY.

Kebir (Smith)	1
Albert	2
Hickory Nut (Ober)	3

Time—3:14.

This stake was not given by the State Agricultural Society. Permission to trot was given a local association.]

FRIDAY, SEPTEMBER 19, 1890.

RACE No. 26—RUNNING.

The California Annual Stake. A sweepstake for two-year olds (foals of 1888); one hundred dollars each, h. f., or only ten dollars if declared on or before January first; fifteen dollars by May first, or twenty-five dollars by August 1, 1890; declarations void unless accompanied by the money; with six hundred dollars added; of which one hundred and fifty dollars to second; third to save stake. Winner of Autumn Stake to carry seven pounds extra; winner of any other stake to carry three pounds; of two or more, seven pounds extra. Maidens allowed five pounds. One mile. Closed in 1889 with twenty-three nominations.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Conrad, b. c., by Flood; dam, imp. Goula, by Exminster.	L. J. Rose.	Los Angeles.
Lodowic, b. c., by Longfellow; dam, Carrie Phillips.	L. U. Shippee.	Stockton.
Mero, b. c., by Wildidle; dam, Precious, by Lever.	R. B. Cockrell.	Salinas.

SUMMARY.

Conrad (Burrell)	1
Lodowic (Morton)	2
Mero (Hennessy)	3

Time—1:43½.

RACE No. 27—RUNNING.

The President Stake. A sweepstake for three-year olds (foals of 1887); one hundred dollars each; of which five dollars must accompany nomination; ten dollars payable January 1, 1889, fifteen dollars January 1, 1890; twenty dollars May 1, 1890; the remainder fifty dollars the day of the race. Payments not made as they become due forfeits money paid in and declares entry out; seven hundred and fifty dollars added. The five stakes and five hundred dollars of the added money to winner; one hundred and fifty dollars to second; one hundred dollars to third. Winner of Breeders' Stake to carry seven pounds; of any other three-year old stake of the value of one thousand dollars, five pounds; of two or more, seven pounds extra. Maidens allowed five pounds. One mile and a half. Closed in 1888 with twenty-three nominations.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Take Notice, b. c., by Prince Charlie; dam, Mota Bene, by imp. Glenelg.	L. U. Shippee.	Stockton.
Mohawk, b. c., by Norfolk; dam, Irene Hard- ing.	P. Herzog.	Sacramento.
Sacramento, b. c., by Joe Hooker; dam, Ada C.	George Hearst.	San Francisco.

SUMMARY.

Take Notice (Morton)	1
Mohawk (D. Dennison)	2
Sacramento (Ross)	3

Time—2:41½.

RACE No. 28—RUNNING.

The Rico Stake. For all ages; of fifty dollars each; fifteen dollars forfeit; the third to save stake; of which one hundred dollars to second; third to save stake; of which one hundred dollars additional if 1:41½ is beaten. Stake to be named after the winner. Rico's time (1:42) is beaten. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Marigold, ch. f., by Milner; dam, Katy Pease, by Planet	Matt. Storn	Sacramento
Daisy D, b. m., by Wheatly; dam, Black Maria, by Belmont	Owen Bros.	Sacramento
Jackson, b. s., by Luke Blackburn; dam, Ivy Leaf	Chas. Kerr	Sacramento

SUMMARY.

Marigold (Cook).....
Daisy D (Burrell).....
Jackson (Casey).....

Time—1:42½.

RACE No. 29—RUNNING.

The La Rue Stake. A handicap for all ages; of one hundred dollars each, half the time; with five hundred dollars added; of which one hundred dollars to second, fifty dollars to third. One mile and a half.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Nabeau, b. g., by Nathan Coombs; dam, Beauty, by imp. Hercules	Elmwood Stables	Sacramento
Lurline, ch. m., by Longfield; dam, Katy Pease, by Planet	Matt. Storn	Sacramento
Picnic, br. m., by imp. Mr. Pickwick; dam, imp. Countess	L. U. Shippee	Sacramento

SUMMARY.

Nabeau (Cota).....
Lurline (Cook).....
Picnic (Morton).....

Time—2:37½.

RACE No. 30—RUNNING.

Free purse, three hundred dollars, of which fifty dollars to second. For all ages; that have started at this meeting and beaten once, allowed five pounds; twice, ten pounds; three times, ten pounds. One and one sixteenth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Fannie F, b. m., by Wildidle; dam, Sally Hart	J. H. Muse	Sacramento
Kildare, ch. g., by Kyrle Daly; dam, Mistake, by Wildidle	Matt. Storn	Sacramento
Alfarata, br. m., by Wildidle; dam, Mary Givens	T. S. Montgomery	Sacramento
Leland, b. c., by Flood; dam, Amelia, by Lowlander	W. M. Murry	Sacramento

SUMMARY.

Fanny F (Courtney).....1
Kildare (Cook).....2
Alfarata (Murphy).....3
Leland (Madden).....0

Time—1:50½.

SATURDAY, SEPTEMBER 20, 1890.

RACE No. 31—TROTTING.

20 Class. Purse, one thousand five hundred dollars. [Race declared off.]

SPECIAL TROTTING.

Purse, four hundred dollars. For named horses.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Clay Duke, b. s., by Alcona; dam, Metamora, by Duke of Orange	J. W. Martin	Woodland.
Latham Almont, b. s., by Tilton Almont; dam, by Oregon Chief	J. Deter	Colusa.
Acme, Jr., b. s., by Alcona; dam, Madonna, by C. M. Clay, Jr.	J. P. Roderhaver	Petaluma.
Clay Duke, b. s., by Alcona; dam, Metamora, by Duke of Orange	C. F. Bunch	Ione.

SUMMARY.

Clay Duke (Martin).....2 1 1
Latham Almont (Ober).....1 2 dis.
Acme, Jr. (Shaner).....3 3 dis.
Ajax (Bunch).....4 dis.

Time—2:31½; 2:31½; 2:29.

RACE No. 32—TROTTING.

25 Class. Purse, one thousand dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Frank M, ch. g., by Priam; dam, by General Panama	T. E. Keating	Sacramento.
Silas Skinner, blk. s., by Alcona, Jr.; dam, Montana, by Almont	De Turk & McGraw	Santa Rosa.
Ladywell, blk. m., by Electioneer; dam, Lady Lowell, by Schultz's St. Clair	Palo Alto Stock Farm	Menlo Park.
Una Wilkes, b. m., by Guy Wilkes; dam, Danche, by Arthurton	San Mateo Stock Farm	San Mateo.
Clara Z, gr. m., by Capri; dam, by A. W. Richmond	J. Hasting	Petaluma.
Clara Z, gr. m., by Capri; dam, by A. W. Richmond	P. Brandow	San Francisco.

SUMMARY.

Frank M (Keating).....1 2 1 1
Silas Skinner (McGraw).....2 1 2 2
Ladywell (Havey).....3 3 3 3
Una Wilkes (Goldsmith).....5 4 5 4
Clara Z (Shaner).....4 5 4 5
Foxy (Brandow).....dis.

Time—2:21; 2:22½; 2:23½; 2:23½.

RACE No. 33—TROTTING.

Four-year Old Stake. One hundred dollars entrance; of which twenty-five must accompany nomination; twenty-five dollars payable July first; remainder payable August 10, 1890; four hundred dollars added by the Society, March 15, 1890, with six nominations.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Margaret S, by Director (2:17); dam, May Day, by Cassius M. Clay, Jr.	Pleasanton Stock Farm .....	.....

SUMMARY.

Margaret S (McDowell).....

RACE No. 34—TROTTING.

Three-year Old Stake. One hundred dollars entrance; of which twenty-five must accompany nomination; twenty-five dollars payable July first; remainder payable August 10, 1890; four hundred dollars added by the Society, March 15, 1890, with six nominations.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Regal Wilkes, b. c., by Guy Wilkes; dam, Margaret, by Sultan	San Mateo Stock Farm .....	.....

SUMMARY.

Regal Wilkes (Goldsmith).....

SPECIAL PACING.

Purse, five hundred dollars. For named horses.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Almont Patchen, br. s., by Juanito; dam, Glidey	Corey & Hanks .....	.....
Rupee, br. h., by Guy Wilkes; dam, Sable Hayward	San Mateo Stock Farm .....	.....

SUMMARY.

Almont Patchen (Corey)..... 1
Rupee (Goldsmith)..... 2

Time—2:17 $\frac{3}{4}$; 2:18 $\frac{1}{2}$; 2:22 $\frac{3}{4}$.

SPEED PROGRAMME—SPRING MEETING, 1890.

SATURDAY, APRIL 26, 1890.

RACE No. 1.

Purse, four hundred dollars. For three-year olds and upwards; fifteen dollars from winners to go to second horse. A winner this year at this distance to carry three pounds extra. Maidens allowed, if three years old, five pounds; four or more, ten pounds. Five eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Farrow, br. h., by Connor; dam, Della Walker	W. H. E. Smith	Portland, Or.
Kitty Van, b. m., by Vanderbilt; dam, April	J. R. Ross	Sacramento.
Jackson, b. h., by Luke Blackburn; dam, Ivy	H. Howard	Sacramento.

SUMMARY.

Al Farrow (Hill)..... 1
Kitty Van (Narvaez)..... 2
Jackson (Gannon)..... 3

Time—1:15.

RACE No. 2.

Purse, five hundred dollars. A sweepstake for two-year olds (foals of 1888); of fifty dollars each, or only ten dollars if declared by January first, or fifteen dollars by March 1, 1890; five hundred dollars added, of which one hundred dollars to second. Winners of five hundred dollars added, of which one hundred dollars to second. Winners of five hundred dollars added, of which one hundred dollars to second. Winners of five hundred dollars added, of which one hundred dollars to second. Winners of five hundred dollars added, of which one hundred dollars to second. Beaten maidens allowed, if once, three pounds; if twice, five pounds. Closed in 1889 with thirty-seven nominations. Five eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Fairy, b. f., by Argyle; dam, Fairy Rose	L. J. Rose	Los Angeles.
Rufax, ch. c., by Argyle; dam, Amelia	Palo Alto Stock Farm	Menlo Park.
Minnie B, ch. f., by Prince of Norfolk; dam, Wildidle	Dennison Bros.	Sacramento.

SUMMARY.

Fairy (Monahan)..... 1
Rufax (Narvaez)..... 2
Minnie B (D. Dennison)..... 3

Time—1:01.

RACE No. 3.

Selling purse, four hundred dollars; of which fifty dollars to second. For all ages; horses entered to be sold for fifteen hundred dollars, rule weight. One pound off for each one hundred dollars down to five hundred. One mile and a sixteenth.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sheridan, ch. g., by Young Bazaar; dam, Lost Girl	P. Siebenthaler	San Francisco
Kildare, ch. g., by Kyrle Daly; dam, Mistake	Matt. Storn	San Francisco
Oro, b. g., by Norfolk; dam, Golden Gate	J. R. Ross	San Francisco

SUMMARY.

Sheridan (Narvaez)
Kildare (Hitchcock)
Oro (Hill)

Time—1:50½.

RACE No. 4.

The California Oaks. A sweepstake for three-year old fillies (foals of 1887); five dollars each; fifteen dollars forfeit; with six hundred dollars added; one hundred to second, fifty dollars to third, out of stakes. Winners in 1890 to carry five extra. Beaten maidens allowed five pounds. Closed in 1889 with seventeen nominations. One mile and an eighth.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Muta, ch. f., by Wildidle; dam, imp. Mutiny	Palo Alto Stock Farm	San Francisco
Raindrop, b. f., by Wildidle; dam, imp. Tear-drop	W. L. Appleby	San Francisco
Marigold, ch. f., by Milner; dam, Katy Pease	J. B. Chase	San Francisco

SUMMARY.

Muta (Narvaez)
Raindrop (Appleby)
Marigold (Monahan)

Time—1:59.

TUESDAY, APRIL 29, 1890.

RACE No. 5.

The Matadero Stake. A sweepstake for two-year olds (foals of 1888); of one dollar each, h. f., or only ten dollars if declared by January first, or twenty-five dollars if declared by March 1, 1890; with five hundred dollars added; one hundred dollars to second, fifty dollars to third. Winners of any event of the value of eight hundred dollars to carry three pounds; of one thousand dollars, five pounds; of two of any value, seven pounds extra. Beaten maidens allowed five pounds. Closed in 1889 with nineteen nominations. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rinfax, ch. c., by Argyle; dam, imp. Amelia	Palo Alto Stock Farm	San Francisco
Minnie B, ch. f., by Prince of Norfolk; dam, by Wildidle	Dennison Bros.	San Francisco
The Drake, b. c., by Leonatus; dam, The Teal	L. U. Shippee	San Francisco

SUMMARY.

Rinfax (Narvaez) 1
Minnie B (Hazlett) 2
The Drake (Hitchcock) 3

Time—1:16½.

RACE No. 6.

The Chris. Green Handicap. A sweepstake for all ages; of fifty dollars each, h. f., ten dollars if declared; with five hundred dollars added; second horse to receive one hundred dollars out of stakes. A winner of any race after publication of weights, of one pound or upwards, to carry three pounds; of two races, five pounds; of three or more, ten pounds. This will not apply to horses handicapped at one hundred and twenty pounds or over. Closed February first with fourteen nominations. One and one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Farrow, b. h., by Connor; dam, Della Walker	W. H. E. Smith	Portland, Or.
Longshot, ch. h., by Duke of Norfolk; dam, by Longford	W. H. E. Smith	Portland, Or.
Mikado, b. g., by Shiloh; dam, Margery	L. J. Rose	Los Angeles.

SUMMARY.

Al Farrow (Hill) 1
Longshot (Spoonier) 2
Mikado (Monahan) 3

Time—2:10.

RACE No. 7.

Selling purse, four hundred dollars. For all ages; ten dollars from starters to go to second. Maiden allowances: If three years, five pounds; four and upwards, ten pounds. Winners this year allowed five pounds. Allowances cumulative. One and one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Captain Al, blk. c., by Kingston; dam, Black Maria	Miller & Owens	Fresno.
Picnic, br. m., by imp. Mr. Pickwick; dam, imp. Countess	L. U. Shippee	Stockton.
Nettie, ch. m., by Wildidle; dam, Nettie Brown	W. L. Appleby	Sacramento.

SUMMARY.

Captain Al (Hennessy) 1
Picnie (Hitchcock) 2
Carmen (Narvaez) 3

Time—1:53½.

RACE No. 8.

The Weinstock, Lubin & Co. Stake. A sweepstake for three-year olds (foals of 1887); of fifty dollars each, h. f., or only fifteen dollars if declared January 1, 1890; of fifty dollars added; of which one hundred dollars to second, fifty dollars to third. Winners in 1890 of any three-year old event, when carrying weight for age or the value of five hundred dollars, to carry three pounds; of one thousand dollars to carry five pounds extra. Non-winners allowed five pounds. Closed in 1889 with thirty-two nominations. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Racine, b. c., by Bishop; dam, imp. Fairy Rose	Palo Alto Stock Farm.	Menlo Park.
Pliny, b. g., by Flood; dam, Precious	Kelly & Samuels	San Francisco.
Rico, br. g., by Shannon; dam, Fanny Lewis	L. J. Rose	Menlo Park.

SUMMARY.

Racine (Narvaez).....
 Pliny (Cook).....
 Rico (Monahan).....

Time—1:42½.

THURSDAY, MAY 1, 1890.

RACE No. 9.

The Spring Stake. A sweepstake for three-year olds (foals of 1887) that have won a race previous to January 1, 1890. Fifty dollars entrance, h. f., or fifteen dollars if declared April 1, 1890; four hundred dollars added; second to receive seventy-five dollars from stakes. Maidens at time of starting allowed five pounds. Closed in 1890, with twelve nominations. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rover, ch. c., by Wildidle; dam, imp. Rosetta	L. J. Rose	Menlo Park.
Kiro, ch. c., by Joe Hooker; dam, by Foster	W. M. Murry	San Francisco.
Leland, b. g., by Flood; dam, Amelia	W. M. Murry	San Francisco.

SUMMARY.

Rover (Monahan).....
 Kiro (Narvaez).....
 Leland (Hennessy).....

Time—1:45½.

RACE No. 10.

The Western Hotel Stake. A sweepstake for two-year old fillies (foals of 1887); of fifty dollars each; fifteen dollars forfeit; with five hundred dollars added; of five hundred dollars to second. Winners to carry five pounds extra. Beaten maidens allowed five pounds. Closed in 1889 with twenty-seven nominations. Five eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Fairy, b. f., by Argyle; dam, imp. Fairy Rose	L. J. Rose	Menlo Park.

SUMMARY.

Fairy (Monahan).....

RACE No. 11.

The Hall, Luhrs & Co. Handicap. A sweepstake for three-year olds (foals of 1887); of fifty dollars each, h. f., or only ten dollars if declared January 1, 1890, or fifteen dollars if declared February 1, 1890; of fifty dollars added; of which one hundred dollars to second, fifty dollars to third. Closed in 1889 with twenty-nine nominations. One mile and a quarter.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Pliny, b. g., by Flood; dam, Precious	Kelly & Samuels	San Francisco.
Sheridan, ch. c., by Young Bazaar; dam, Lost	P. Siebenthaler	Sacramento.
Muta, ch. f., by Wildidle; dam, imp. Mutiny	Palo Alto Stock Farm	Menlo Park.

SUMMARY.

Pliny (Casey).....1
 Sheridan (Lawless).....2
 Muta (Narvaez).....3

Time—2:10.

RACE No. 12.

The Hall, Luhrs & Co. Handicap. A sweepstake for three-year olds (foals of 1887); of fifty dollars each, h. f., or only ten dollars if declared January 1, 1890, or fifteen dollars if declared February 1, 1890; of fifty dollars added; of which one hundred dollars to second, fifty dollars to third. Closed in 1889 with twenty-nine nominations. One mile and a quarter.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Kildare, ch. g., by Kyrle Daly; dam, Mistake	Matt. Storn	Sacramento.
Oro, b. g., by Norfolk; dam, April Fool	J. R. Ross	Sacramento.
Applause, b. g., by Three Cheers; dam, Alice N.	Wesley George	San Francisco.

SUMMARY.

Kildare (Hitchcock).....1
 Oro (Kees).....2
 Applause (Narvaez).....3

Time—1:57½.

SPECIAL RACE.

The Hall, Luhrs & Co. Handicap. A sweepstake for three-year olds (foals of 1887); of fifty dollars each, h. f., or only ten dollars if declared January 1, 1890, or fifteen dollars if declared February 1, 1890; of fifty dollars added; of which one hundred dollars to second, fifty dollars to third. Closed in 1889 with twenty-nine nominations. One mile and a quarter.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Ed McGinniss, b. h., by Grinstead; dam, Annie G.	Kelly & Samuels	San Francisco.
G W (Hennessy), b. g., by Kyrle Daly; dam, Elizabeth	Dennison Bros.	Sacramento.
Tycoon, ch. h., by Reveille; dam, Margery	L. J. Rose	Los Angeles.

SUMMARY.

Ed McGinniss (Casey).....1
 G W (Hennessy).....2
 Tycoon (Monahan).....3

Time—1:58.

SATURDAY, MAY 3, 1890.

RACE No. 13.

The Golden Eagle Hotel Handicap. A sweepstake for two-year olds (foals of 1888) one hundred dollars each, h. f., or only ten dollars if declared January 1, 1890; or five dollars if by 4 p. m. day before the race; with six hundred dollars added; of one hundred and fifty dollars to second. Closed in 1889 with twenty-nine nominations. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Arcade, ch. c., by Milner; dam, Nannie Hubbard	H. I. Thornton	San Francisco
Bon Ton, ch. c., by Flood; dam, May D.	J. E. Smith	San Francisco

SUMMARY.

Arcade (Casey)
Bon Ton (Narvaez)

Time—1:18½.

RACE No. 14.

The Hopeful Handicap. A sweepstake for all ages; of twenty-five dollars each, h. f., or ten dollars if declared, with four hundred dollars added; of one hundred dollars to second. One and one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Longshot, ch. h., by Duke of Norfolk; dam, by Langford	W. H. E. Smith	Portland
Pliny, b. g., by Flood; dam, Precious	Kelly & Samuels	San Francisco
Sheridan, ch. c., by Young Bazaar; dam, Lost Girl	P. Siebenthaler	San Francisco
Oro, b. g., by Norfolk; dam, Golden Gate	J. R. Ross	San Francisco

SUMMARY.

Longshot (Hill)
Pliny (Casey)
Sheridan (Narvaez)
Oro (Hennessy)

Time—1:55½.

RACE No. 15.

The California Derby. A sweepstake for three-year olds (foals of 1887); of one hundred dollars each, h. f., or only ten dollars if declared January first, or two hundred dollars March 1, 1890; with one thousand dollars added; of which one hundred dollars to second, one hundred dollars to third. A winner in 1890 of any three-year event, when carrying weight for age or more, of the value of five hundred dollars, to carry three pounds; of one thousand dollars, or two races of any value, five pounds extra. Non-winners of a sweepstake allowed five pounds; maidens allowed three pounds. Closed in 1889 with thirty-two nominations. One mile and a half.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Muta, ch. f., by Wildidle; dam, imp. Mutiny	Palo Alto Stock Farm	Menlo Park

SUMMARY.

Muta (Harris)

RACE No. 16.

For all ages; ten dollars from starters to go to second place. Non-winners this year at time of starting allowed, if three years old, five pounds; if two years, ten pounds; five and upwards, twelve pounds. Mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Guido, by Double Cross; dam, Aurora	W. H. Babb	Sacramento
Louisa M, b. m., by Kyrle Daly; dam, Night Hawk	J. McM. Shafter	San Francisco
Jackson, b. h., by Luke Blackburn; dam, Ivy Leaf	Harry Howard	Sacramento

SUMMARY.

Guido (Casey) 1 1
Louisa M (Hazlitt) 3 2
Jackson (Gannon) 2 3

Time—1:44; 1:43.

OPENING ADDRESS

DELIVERED BEFORE THE STATE AGRICULTURAL SOCIETY, AT
 MENTO, CALIFORNIA, ON FRIDAY EVENING, SEPTEMBER 12,

By HON. A. CAMINETTI, of Jackson, Cal.

MR. PRESIDENT, LADIES AND GENTLEMEN: It has been the habit of the Society at its yearly exhibitions to formally declare the same and to welcome thereto from all portions of the commonwealth thousands of visitors. The time allotted will prevent anything more than a formal address. I congratulate the management on the evidences of their energy and successful administration. As we about in the Pavilion and Park, and gaze upon the products of the farm, of workshop and studio, attesting the greatness of California, we cannot but be impressed with the magnitude of our resources and the marvelous growth of her thousand industries.

This occasion and the recurring anniversary of California's admission into the Union suggest the questions: From whence has all this proceeded? Who inaugurated, who gave thought and power to accomplish these grand results? And last, but not least, who will maintain these achievements, and, profiting by the lessons and experiences of the past, assist in inviting that destiny which awaits California?

The first question has been answered by the homage and veneration of our people only a few days ago, and the second will be answered in the future by the rising generation. Reference to these subjects calls up a flood of memories connected with pioneer days. The events of September 9, when the bear flag—the emblem of endurance—was given to the state, and the California republic proclaimed; the raising of the state flag with its stripes at Monterey, and the formal occupation of the country by the name of Uncle Sam just a few hours before the arrival of an iron-clad man-of-war bent on a like mission; the settlement of New Helms, the building of Sutter's Fort; the historic mill and millrace at Colusa, and the finding of the precious metal by Marshall—these are among the number that appeal strongly for consideration.

By the generous and noble action of public spirited citizens we are now assured that no longer will it be said that we have forgotten the Mecca of California pioneers—Sutter's Fort. We at last have a just appreciation of its sacred memories. We should never forget in its time it was dedicated to hospitality and fraternity. Let the memory of the days of Auld Lang Syne, when it shall have been reconstructed, offer at its shrine our best efforts and prayers for the perpetuation of the blessings that have resulted from the efforts which began its birth within its walls. Shall we forget its builder? On the banks of the Delaware, far from the scenes that made him famous, General Sutter has been laid away in the embrace of death. A benefactor of his country whose hand was always ready to perform deeds of kindness, and whose heart's impulses stayed not for the mind to freeze what charity

turned by his life and services a resting place in the State he was instrumental in establishing. No effort should be spared until his remains are laid in the old fort, where the grateful breezes of the Sacramento will waft his tender requiems o'er his grave, and California, guarding it, will render from the present sovereign to the departed one the homage of her sons and daughters throughout all time.

Another episode in our history crowds itself upon us. The discovery of gold brought hither a large population, and a demand for a safer and more permanent government became a necessity. It was then that a voice was demanded in the sisterhood of States. A Convention was called, a Constitution framed and immediately adopted by the people. At a short time elapsed when California, accompanied by her bear, followed her way to the Capitol at Washington and knocked at the doors of Congress, asking for sovereign powers. When asked what were her claims, she stepped up to the Goddess of Liberty and said: "I am her defender; I bring you love; this (pointing to the bear) is my defender. Look yonder you will find the strength and resources that will bind our republic so strong in every element that it will astonish the world, defy enemies from without, and quell those from within." It is said, how true it may be I know not, that when she had finished her plea, she were those who saw the Goddess of Liberty nod her assent, and took the bear to her side. From this episode our great shield took shape.

The voice of party strife was quelled in the admiration of the new member. She became a welcome guest of the republic, and on the ninth of September, 1850, tied the knot that bound the Golden Gate with the mouth Rock by cords of love and links of gold.

California can point with pride to her first Convention and with honor to its labors. In it sat some of the ablest minds in the land. Incredible as it might appear to some, yet you who were here then can bear testimony that California, on the very first day of her Statehood, was as well equipped for the performance of the various functions of government as she has been at any time since. This is accounted for by the class of people who constituted the bulk of the population. It was no uncommon thing to see men who had held high positions—doctors, lawyers, ministers, graduates of the best collegiate institutions—coming from every quarter of the globe, engaged as honest miners.

The miners of '49 furnished the Union army with some of the ablest generals; both Houses of Congress with men fitted to be ranked with the leaders of the day. In the mercantile community and the enterprising men of America, California figures prominently. The fact is, that the men of that day, pioneers in the proper sense of the term, were constituted with the attributes of true citizenship, which sent the light of progress where darkness formerly prevailed, and the din of industry where the sweet monotony of existence had never been disturbed.

In remembering the pioneer father, we should not forget the lady pioneers. They, too, belong to that noble race who have kept step with the march of civilization to these shores, sharing the dangers and trials of the period. The great work done by our fathers and mothers impose on us grave responsibilities. There are many things for us to do in order to perform our whole duty; something more than merely saying that we are sons of that noble band. Thought, industry, honorable deeds, and lives that can be squared by the Golden Rule are required to

grasp the ideal of our responsibilities and reduce it to the reality of success achieved.

There should not be a son of California without some object some mark which by toil and energy he must at all hazards place for them in the confidence of those about them. But some "What is there for us to do?" As a pioneer's son, I regret to hear an expression coming from their lips. Pioneers never asked that question. They went forth, and the first thing that came along they did it well. That opened the way for more and better things you are in earnest to do the best you can, the first opportunity presents itself, grasp it; no matter what it is, so that it be honest. Put your whole soul into it. Victory is sure to follow. You will as from one success you go to another, that the horizon within to do and act constantly expands.

Things you never saw before open to your vision. You will if you will make the effort. Remember this: "That in the early youth, which fate reserves for a bright manhood, there is no such as fail." If you should find it don't mention the fact. It would be a "bad prospect." Your fathers never found it. No persevering man yet panned it out in the "diggings" of energy and true manhood. The opportunities we possess, blessed with a variety of climate, giving us to pursue every avocation, and bountifully supplied with material and agricultural wealth, commanding commercial power, enjoying the best of government, the best that man's patriotism could devise, to intellectual and moral advancement by churches and schools in every city and hamlet in the land, and aided by the charming influence of charity and benevolence, as they invite us in humanity—ice—all combining to extend our progress, lift our thoughts, and reach that destiny which is the reward of earnest endeavor and true devotion to principle—we must not fail. The gentle spirits of the departed with the living pioneers and implore us, as we cherish the memory of the former and appreciate the companionship and counsel of the latter, to make every effort, to strain every nerve and exercise every faculty of mind to merit, when we, too, shall lay down the cares of this life, the verdict of a proud people in the words, "Well done, thou good and faithful servant; depart in peace."

As our fathers and mothers, by joint efforts, built the structure of present power and prosperity, so should their sons and daughters be hand in hand to perpetuate it. I am glad to see the efforts of the daughters of California to keep alive the sentiment and the memory of '49. There is in that "union of hearts and union of hands," by the sons and daughters of California, a presage of the bright future that great future which shall forever shed a halo of glory over our pioneer days.

The State Agricultural Society has for years been engaged in the promotion of California's development. From the beginning it has numbered among its active workers and thinkers men of '49 and their companions, with the characteristic push of their time. It has kept this organization in the van of progress. Undertaking when mining was the principal industry—when Chili furnished us with flour, the East with dried fruits, and European nations with numberless articles for the comfort of man—it has worked un-

on fleets go out of the Golden Gate laden with wheat and other products for foreign marts of trade; train after train moving eastward with green and dried fruits for the enjoyment of our eastern brethren, and now it discerns from the increasing volume of sales that in the near future California will be the orchard of America.

The Society needs the active coöperation of the people. It has merited in the past. It should receive it henceforth.

And now, in conclusion, ladies and gentlemen, by request of the Society, I bid you a hearty welcome to this exhibition, trusting that you may enjoy its pleasures, profit by its lessons, and when you return to your respective homes ask yourself the question: "What can I do next year to add to the interest and value of the State Fair?"

ANNUAL ADDRESS

DELIVERED BEFORE THE STATE AGRICULTURAL SOCIETY OF CALIFORNIA, AT SACRAMENTO, SEPTEMBER 18, 1890.

By WILLIAM H. MILLS, of San Francisco.

MR. PRESIDENT, AND GENTLEMEN OF THE STATE BOARD OF AGRICULTURE: The invitation to deliver the annual address before your honorable body, received at the hands of your honored President, plainly indicates the questions you desired should be discussed before you. In accordance with the indication of the letter of invitation, your President has taken the very proper precaution of discussing with me personally the matters to which your attention should be called, and the theme to which the modest merit of this effort should be addressed.

The annual exhibitions of the State Agricultural Society are designed to be illustrative of the progress of agriculture, horticulture, and mechanic arts in our State. These exhibitions are in the highest sense an epitome of State progress. The inventions of the mind, the skill of the hands, and the intelligent direction of nature in the production of the objects of human desire, are presented annually for the inspection and the thoughtful consideration of our people. This is the pride of industry. Here useful toil is crowned with honor, and that crowning, labor is dignified and ennobled. For thirty-eight years these exhibitions have been held, each exhibition a leaf in the history of the progress of our State. But thirty-eight years is scarcely a day in the history of States and Nations. More than this, it is but a noon to the morning of to-day. But, notwithstanding the brief time which has elapsed since the foundations of our State were laid, the startling contrasts and gratifying comparisons would be disclosed if the first annual exhibition of this Society could be placed side by side with that of to-day.

You need not be told that the American settlement of California was induced by an ardent and expectant search for gold, but when you consider the progress California has made in field culture, you do not need to be reminded that its first occupants and inhabitants had no fault to find with its agricultural resources. Men are naturally intolerant as to the differences they encounter between the countries with which they are familiar and those they casually visit. Moreover, men in seeking new homes, seek those where the industries they have pursued in the old are the standards of industry in the new. Of the truth of this individual has a witness in his own mind. We are not attracted to countries whose objects of culture are wholly unfamiliar to us. When an exhibition is spread out before a spectator, that portion of it which he is familiar and the result of that industry in which he is engaged will be most attractive, because it will be under the most intelligent and familiar observation. The people of the Temperate Zone, skilled in the field culture possible in the latitudes

of activity, find strangely unfamiliar objects of cultivation unattractive, and when the proposition to engage in the cultivation of the unfamiliar object is under consideration. It is for this reason that men migrate to the latitudes of their nativity. They seek new homes with more favorable environment for personal prosperity, but they do not seek a change of industry, which involves the abandonment of that with which they are familiar for the adoption of that which is new. They feel a confidence in the skill and judgment which observation and experience have ripened in their minds, so long as the question of engaging in industries already familiar is presented, but they naturally lose that confidence when methods of agriculture and horticulture, relating to unfamiliar productions, are a part of the problem involved in the change of residence.

The agricultural and horticultural possibilities of California were a closed book to the pioneer population of this State. The seasons for seed time and harvest were new and strange. The art of agriculture, as it was known and practiced by themselves and their fathers, was not applicable here. This is not to be wondered at. The time of growth and verdure, as known to them, was from the spring month of April to the middle of October of autumn. Then followed a winter of death to vegetation, a period of slumber, in which all growth was bound in icy chains and they had to sleep in the cradle of winter. To them, spring with its seed time, summer with its ripening suns, and autumn with its golden harvests, marked certain specific months of the calendar. They found these months in the old calendar the winter of suspended animation in California. Instead of the June of verdure and blossoms, they found one of russet hills and sun-parched plains, with all the unmistakable conditions of the aridity of death. But, on the other hand, they found a longer autumn and a longer winter of verdure. Finally, the suggestion came that the old almanac was as inapplicable to the seasons of California as the old art of agriculture had proven. Instead of the winter of former experience, they found spring-time to follow harvest, verdure to come with the rains of heaven, growth and vegetation belonging to the months relegated to the rigid bonds of winter in the homes they had left. Slowly the true meaning of the new environment began to be understood. The new art of agriculture followed the suggestion of new possibilities in nature, until to-day the art of horticulture and agriculture, as practiced in California, is not known elsewhere in the world, and it is to the material and moral results of this new adaptation of industry to a new environment that your attention is to be called.

You have plainly indicated to me that you desire the matters herein presented for publication. Therefore, what is said herein will go forth with your indorsement. I earnestly ask that before this indorsement is recorded, the matter herein presented shall receive your very candid consideration, and its publication to the world shall receive your unanimous consent. In this way it will become your statement, and with the indorsement of your honorable body it will be received, by those to whom it is accorded, as authentic. It cannot be your purpose to place it before our own people only, and since it is to go forth to the world, to the more densely populated portions of our common country, in whose borders we are seeking a reinforcement of our population, an augmentation of its industrial capacity, and additions to the capital available for the development of our diversified industries, let us place

ourselves at once in the mental attitude of directly addressing those who are unfamiliar with the resources of our State. Let us, if you will, imagine ourselves before an audience of those who desire to know their place of residence, and leave the older and more finished conditions of our country for those wherein the conditions of primitive life still obtain. With the earnest purpose of awakening in their minds an interest in our State, let us be equally earnest in a determination to present the facts fairly and truthfully, so that if any honor us with a change of residence in our favor, the responsibility of disappointed representation will not rest with us.

At the outset we are impelled by candor to admit that the growth of this commonwealth has not kept pace with the growth of the country lying immediately west of the Mississippi River, nor yet west of the Missouri River. Our first immigration was phenomenal. It is estimated that in the first two years after the discovery of gold in California the alluring opportunity of acquiring great wealth by a sudden increase of fortune in the way of gold discovery brought to this State four hundred thousand people. The stories of the fabulous wealth of our early settlers attracted a population as if by enchantment. That population was uninfluenced by immigration literature, by maps, pamphlets, by newspaper descriptions, or by any other method or device of recent times to promote the growth of States. The story of gold discoveries in the form of broad placer fields, open to the world, made a strong appeal to the adventurous spirits of all countries. They came by thousands, and they were impelled to come by the hope of greatly improving their condition; in fact, this hope is one of the allurements which have moved the seat of population from one country to another. Population moved from the older to the newer portions of the world, in the hope of finding an environment more favorable to personal prosperity. Our own country populations have left the well developed regions for more sparsely settled territories, in the hope of acquiring property and undeveloped values, and thus securing the advantage of the immediate and coming development. Allured by the hope of sudden wealth, the hope could not discourage and hardship could not deter the great influx of incoming population. In a modified way there is a lesson in the fact that where actual prosperity exists, population comes by the force of an irresistible invitation; where prosperity is merely promised, immigration can be induced only by argument and persuasion. A general prosperity in our State will bring us a reinforcement of immigration, population, uninvited except by the cogency of prosperity itself.

The gold-seekers formed the basis of our population; they laid the foundations of our social and political structure; they made the conditions in which the elements of our civilization were cast. They were a daring, pioneering people to the very verge of being speculative and adventurous. The influences of primitive conditions are very difficult of eradication. The pioneer population of any country gives direction, color and character to its growth. The primitive conditions, therefore, have had a strong influence upon the character of populations long after those conditions have passed away. We are by no means entirely emancipated from the influences of our earliest environment. The speculative spirit, the methodical and plodding industry. The diligent industry, the methodical habits to which we are so much indebted for the development of our agricultural and horticultural industries are attributes

of recent growth; hence, it may be truthfully said that our population, but twenty years old, has less than twenty years of development, when those enterprises and industries relating to its real and permanent sources of prosperity are considered. When success in the search for gold ceased to be as hazardous as a lottery, and successful mining became dependent upon more thoughtful and intelligent methods, for many years the attention of the world was withdrawn from California. This attention was revived with the stock speculative period, the most injurious period in our history. During the many years of its pernicious prevalence, our best enterprise and a large portion of our capital were employed in the discovery and operation of silver mines. In spite of all these, however, the good work of creating a commonwealth, founded upon the enduring industries invited by the fertility of the soil, had gone on, and since the subsidence of the speculative period, has made year by year gratifying progress. Great commonwealths cannot be founded upon the exceptional and the unusual. The wealth of every State and every nation is founded upon the industrial capacity of its people, and in the direction of this industrial capacity in producing the natural and legitimate objects of human desire. It is, therefore, fairly within the lines of reasonable representation to say that the foundations of California, which are to endure and are to grow into an empire of wealth and population, were laid less than twenty years ago. The real and enduring industries of our State are less than twenty years of age. In this great respect our annals are misleading. We were admitted a State into the Union forty years ago, but the California of the first twenty years of this period saw the morning of promise, its midday splendor of romantic adventure, and is now in declining afternoon. The new creation of this commonwealth is now at its earliest dawn. Our annals may therefore be justly divided into the California of history and the California of prophecy. Forgetting the past and looking to the future, the first consideration which arrests our attention is our geographical position.

ECONOMIC COMMUNICATION THE EQUIVALENT OF PHYSICAL CONTIGUITY.

Since the birth of this State, a great economic force has come into operation. I refer to cheap and rapid communication. Economic transportation is the equivalent of physical contiguity. Let us make this plain. Go back in the history of production and transportation a hundred years, and you will find that the area of the profitable production of wheat did not extend beyond twenty-four miles from the market for that cereal. The profitable area of production for hay did not reach beyond ten miles of its market. The area of the profitable production of garden stuff, being a little higher class, had a somewhat larger extent. We may, however, safely say that one hundred years ago the area of the profitable production of all the products of the soil did not exceed twenty-five miles by land. The distance that food products could be carried by water was far greater, but at the beginning of the present century, twenty-five miles by navigable water constituted the limit of profitable production for nearly all species of field culture. The navigable waterways of the country form channels of cheap communication; hence, cities and towns sprung up along the banks of navigable rivers; they were marts of exchange. Beyond them a distance of twenty-five or thirty miles, the limit of profitable production was

reached. The grazing interests were somewhat better off. Fat cattle could be driven from one hundred to one hundred and fifty miles. Cattle could be driven profitably five hundred miles, and horses known to be taken over a thousand miles. The advent of railroads came, and here, around the city in which you are holding this garden vegetables are raised for markets in Denver, Col., and St. Louis, Mo.—even far beyond these limits. Vegetables are raised in the vicinity of this city for the New York market, three thousand one hundred eighty-eight miles distant. Thus the radius of profitable production sweeps over a limit of land transportation three thousand miles as against a length of twenty-five or thirty miles before the advent of steam transportation by railroad on land and steam navigation on the ocean. We shipped from California in 1880, two million eight hundred and eighty thousand pounds of garden vegetables. There has been a gradual and steady increase of the shipments under this head, and in 1888 they had risen to thirty-two million pounds, or more than ten times the quantity shipped in 1880. The same ratio of increase in eight years more would give us three hundred million pounds, and we shall say that the proportionate increase will not be realized?

This doctrine that economic communication may become the basis of all physical contiguity is the basis of all we hope for. It is the most far reaching and significant factor in the future of California. Three days' ordinary wages in England will pay the cost of transportation on one year's supply of breadstuffs for an individual, from the inaccessible and distant wheat-producing zones of the world. The wheat grows less as you approach the seaboard. Breadstuffs are carried in quantities which are practically unlimited along the commercial paths of the globe. Fruits, green and canned, are exchanged with every portion of the earth, and rice is practically as cheap in one portion of the world as another. Live stock is carried across continents and sea. Live chickens are transported economically three thousand miles. Dairy products accompany all other articles of commerce. If taken from a market on a watercourse was the radius of the profitable production of garden stuffs a century ago, and three thousand miles the length of the radius now, the countries at the end of that thousand-mile line are as near to the markets as the gardens within ten miles. Wheat produced in California may be consumed in London at a lower rate of cost than breadstuffs produced within thirty miles of that city one hundred years ago. When the cost of transportation comes to be applied to the retail cost of any article, it becomes appreciable; for illustration, a pound of wheat in Liverpool has had a quarter of a cent added to its value by transportation, even when produced in the most inaccessible wheat fields of the world. The lands devoted to the production of cereals, then, in these most distant portions are in direct competition with the lands devoted to like production in the markets where cereals are produced.

All the assistance rendered by climate and soil in the production of any article is the bounteous gift of nature to the cultivator of it. Under the old system, when transportation was costly, countries widely separated. Under the new system, which is carrying the products of the garden, the orchard, and the field half around the world, with inappreciable value added on account of its cost, every portion of the world is in immediate competition with all other portions.

the production of the objects of human desire. The competition of climates is immediately present in every market of the world. In these markets, we see the fertility of soils and the favoring conditions of climate competing with the environment of every other portion of the world, where any industrial pursuits are followed. In every market there are immediately present the effects of the systems of labor, the methods of production, the favoring conditions of soil and climate; they meet face to face; distance no longer divides them. Their economic assistance has become the equivalent of physical contiguity. Now, suppose that in a single township in some of the valleys of California you have the rigorous climate of Minnesota. Suppose that within that township the thermometer descends to 10 degrees below zero in November, and, with the exception of occasional thaws, never rises above that temperature until March. Suppose that destructive blizzards, accompanied by sleet and snow, rule and reign for six or seven months of the year, would any fruit grower in California be regarded as sane who would plant an orchard within that wintry belt? Now, since communication has become equal to contact, will fruit growing be pursued in any country subjected to the wintry conditions herein described, as against the production of fruit where spring comes at the end of harvest? Take as an illustration the cost of producing wheat in California. There are storms in the harvest period; this is equal to 25 per cent advantage in the production of the crop.

Upon this subject Mr. Shippee of Stockton, an experienced wheat grower, says:

First, we have a climate that is wonderfully well adapted for the production of wheat. In the second place, our lands are level; are cultivated by large gang plows, from two to four in a gang, and handled by one man; while one man is able to plow more in one day in this State than in almost every other State in the Union, in like manner is he able to sow and harrow more. In the third place, the machinery used in harvesting enables the wheat-grower to harvest his entire crop at less than half what it costs in any other State, since no other State possesses these harvesters. Fourth, we have no rains in the summer to interfere; we begin harvesting in June and wind up in October, and are not compelled to take the grain out of the field until the harvest season is over. No other portion of the wheat-producing zones can do this.

Joseph Cone, a very large wheat grower of the Sacramento Valley, confirms these statements, and declares that wheat can be grown for less in California than in any other country of the world. He illustrates graphically the progress that has been made in economic methods of producing wheat, by saying that under the old system, when harvesting was done with a sickle, thrashing done with a flail, and separating done the primitive method of a fan, a tenth of an acre was as much as a single harvester could cut, thrash, separate, and sack in one day; or, in other words, it would require the labor of ten men to harvest, separate, and sack one acre of wheat, but with the machinery now in use the same man can do it in seven and one half days for each man employed in harvesting, or seventy-five times the productive capacity of an individual harvester under former systems.

John H. M. La Rue says:

Wheat may be raised more economically in California than elsewhere is perfectly possible. Our wheat lands are generally level, uniform in quality; our soil is rich and well worked. Our system of summer fallowing enables us to do our plowing in the fall, and our seeding in the long days in the fall before the rainy season commences. As to our long, dry summers, we have ample time for harvest, without danger from weather. Our climate also enables us to use the most improved machinery, both in planting and harvesting. The combined harvester can be used to better advantage in

California than in any other wheat-growing country, and by its use we have been able to reduce the cost of harvesting, thrashing, and cleaning 60 per cent of what it costs in other countries.

I present the testimony of these intelligent and experienced men, practical wheat growers, as conclusive of the assertion that wheat can be grown more cheaply in California than elsewhere. The significance of this can scarcely be realized. Now, if the advantages of climate, and general environment are present in every market of the world, California can raise breadstuffs at a price which would be unmerited to any other portion of the wheat-growing zone. Distance being no longer a factor, whenever the test comes under which wheat survives, wheat growing in California would continue in this State after its discontinuance elsewhere. At the same market rate, then, the wheat producer of California receives a higher reward for his labor. Keeping in mind the position taken at the outset, that we are not presenting these things to an intending emigrant, to a farmer in Iowa or Illinois, can we not say with truth to him that the labor he puts upon his land in those States would reward him better if expended upon fields in California? And is this not an inducement which would lead him to our favor when seeking a new home? Let us reverse the illustration. Suppose that in an Eastern State, in a single county of Ohio, Michigan, or New York, there is a climate where storms in the harvest period are unknown, where hailstorms and windstorms do not waste the ripening grain, and where the gang plow and seeder may be run in seeding time, and the harvester may be run in harvest time, would other lands in the country bear an equal rate to that lying under this favored climate? repeat again, what cannot be too strongly impressed, that the methods of transportation produce economies of production, by the nearness of contact, and that the competition of climates between different portions of the earth is present in every market.

The ultimate operation of this principle will be to produce the article where its production affords the greatest reward to the laborer devoted to its production. No fiscal policy or tariff device will prevent delay, nor eventually wholly prevent, the universal sway of this principle of production. Each object of human desire will be produced in the country where its production costs the minimum of human labor. This principle is inherent in the human mentality. It is inseparable from human desire, because it is the desire of mankind to get the maximum return from the minimum outlay of effort. Mankind, as it will then, sooner or later, adopt this principle of production, apply it to that natural subsidy which favoring conditions bounteously afford upon those products grown in the soil and in the climate most favorable to the motive of their growth. Apply this principle to the entire world, to production in California, and you will perceive that the orchards of California and the vineyards of this State are in immediate competition in the markets of the world with the orchards and vineyards of every other country; that it is possible, therefore, for us to become the basis for the whole world, in its broad and commercial sense. The modern economic methods of transportation have placed orchards, plantations, distant from each other, side by side in a commercial sense, and the tendency of this large factor in controlling and directing the industry of every country cannot be thwarted or arrested. This force is the basis of reciprocity toward which national opinion is so strongly

REDUCTION OF COST OF TRANSPORTATION.

To the average eastern mind, California and its sister Pacific States are on the verge of the continent. Their names are associated with great distance. When they are under consideration as the objective point of a future residence, contemplation is associated with discouraging remoteness. Between California and the fertile area of the Eastern States there lies an uninhabited region. Between the two groups of civilization, that facing the Atlantic and that facing the Pacific Ocean, there are one million five hundred thousand square miles of territory, the average fertility of which is less than one fiftieth the average fertility of the territory lying east of the Missouri River. To the emigrant from an Eastern State to California, the consideration of distance involves the breaking up of home ties, old associations, old acquaintanceship. The distance is too great for the maintenance of old associations. Nor are these things even the most serious source of discouragement. The people of the East regard California as being under special disadvantages in reference to its commercial relation to the rest of the world. To the most casual observation, California labors under a great disability in reference to transportation. It pays the highest price for all supplies imported, and it submits to the greatest discount in consequence of the cost of transportation upon its exports. But, as has already been shown, cost, in its commercial sense, is convertible into distance. If it is the same to ship goods from San Francisco to New York as from the Missouri River to New York, then, commercially, California is as near the great metropolis of the country as the Missouri River. As especially instructive, I beg leave to present the following terminal rates for a period of nine years from 1880 to 1889:

CALIFORNIA TERMINAL RATES, 1880 TO 1889—IN CENTS PER 100 POUNDS, FOR CARRIAGES OF TEN TONS.

YEAR.	CANNED GOODS TO—						CANNED SALMON TO—						DRIED FRUITS TO—						GREEN FRUIT (DECIDUOUS) TO—					
	New York	Pittsburg	Cincinnati	Chicago	St. Louis	Mo. River	New York	Pittsburg	Cincinnati	Chicago	St. Louis	Mo. River	New York	Pittsburg	Cincinnati	Chicago	St. Louis	Mo. River	New York	Pittsburg	Cincinnati	Chicago	St. Louis	Mo. River
1880	145	150	150	150	150	145	150	150	150	150	150	145	300	325	345	362	400	400	200	200	200	200	200	200
1881	150	150	150	150	150	140	150	150	150	150	150	140	190	200	200	200	200	200	180	200	200	200	200	200
1882	140	150	150	150	150	140	150	150	150	150	150	140	180	192	200	200	200	200	180	200	200	200	200	200
1883	125	125	125	125	125	125	125	125	125	125	125	125	180	192	200	200	200	200	180	200	200	200	200	200
1884	125	125	125	125	125	125	125	125	125	125	125	125	180	192	200	200	200	200	180	200	200	200	200	200
1885	125	125	125	125	125	125	125	125	125	125	125	125	180	192	200	200	200	200	180	200	200	200	200	200
1886	125	125	125	125	125	125	125	125	125	125	125	125	180	192	200	200	200	200	180	200	200	200	200	200
1887	125	125	125	125	125	125	125	125	125	125	125	125	180	192	200	200	200	200	180	200	200	200	200	200
1888	110	110	110	110	110	110	110	110	110	110	110	110	140	140	140	140	140	140	112½	125	125	125	125	125
1889	100	100	100	100	100	100	100	100	100	100	100	100	140	140	140	140	140	140	112½	125	125	125	125	125

From the foregoing it will be seen that the rate on canned goods in 1880 was \$300 per car to the Missouri River, to St. Louis, to Chicago, to Cincinnati, to Pittsburg, and to New York. This rate had descended in 1889 to \$200 per car to these six principal centers of distribution. In a commercial sense, therefore, the distance to all these places became equal, notwithstanding the difference of distance from Sacramento to the Missouri River as against New York is two thousand miles. Thus a distance of two thousand miles is absolutely ignored, and New York has exactly the same commercial relation to Sacramento as the Missouri River. It will not be unprofitable here to reannounce the principle that economy of communication is the equivalent of physical contiguity, for in the instance above recited we see that the cost of reaching New York with the products of this State is exactly the same, no greater, than the cost of reaching a point two thousand miles nearer to us.

Glancing at the entire list, we find that canned salmon was carried in 1880 at the rate of \$300 per car to the six cities named, and that the last year was \$200 per car; that the rates on dried fruits in 1880 were \$600 per car to the Missouri River, \$650 to St. Louis, \$724 to Pittsburg, and \$800 to New York, and that they descended in the year 1889 to \$280 per car to the cities named. Green fruit (deciduous) was shown to favor. The rate on raisins to the six cities named in 1880 was \$910 per car to the Missouri River and \$800 to New York. In 1889, the rates were equalized to \$280 to each of the cities named. On vegetables, the rate in 1881 was \$910 a car to the Missouri River, and in 1889, to the same point, the rate was \$200 a car. Taking this last instance of vegetables, and the rate in 1881 was about five times the rate charged to-day. As the vegetables produced in California are carried to-day at about one per cent of what was claimed to be the proper rate eight years ago. The above comparisons had been instituted between the rates of 1870 and 1890, the decrease would have been much more significant and startling. But the other side of the fact is equally significant. The rates on articles of import have experienced a corresponding decrease.

The chief significance of all this is in the question of the elimination of distance. When the rate to Chicago in 1881 on vegetables was \$1,000 per one hundred pounds, or \$1,000 per car, the commercial distance to Chicago was five times greater than in 1889, when the rate was \$1 per one hundred pounds, or \$200 per car. The actual distance to Chicago in miles is two thousand two hundred and seventy-five miles. The rate in 1881 was \$5 per one hundred pounds, or \$1,000 per car. This having descended in 1889 to \$200 per car, or one fifth, removed the rate to within four hundred and fifty-five miles of the gardens of California, thus eliminating and ignoring one thousand eight hundred and twenty miles of transportation, on the basis of the rate in 1881. These facts disclose a tendency in transportation to base all rates upon the relation of markets to each other rather than the distance in miles between them. It is within the bounds of reasonable probability that in a few years this tendency will have so far asserted itself that the question will be the relation between the points of production and of consumption, with scarcely a reference to the distance in miles which separate them. Take, for example, dried fruit, and referring to the table, see how this tendency has already produced results. In 1880, the rate on dried fruit to the Missouri River was \$3 per one hundred

pounds, or \$600 per car. The rate to New York was \$4 per one hundred pounds, or \$800 per carload. In 1889 the rates had descended to an equal rate of \$1 40 per one hundred pounds, or \$280 per car. The adjustment and equalization of freight rates, disregarding the difference of distance between the points named, was controlled and adjusted to a standard of the commercial relations between the producer and consumer, since difference of distance is practically lost sight of. The significance of this tendency to the industries of California, both of its downward character and to its disregard of distance, cannot be overestimated. It means that in the near future the products of California will stand in the markets of the world on terms of perfect equality, the cost of reaching markets, with the products of all other countries.

THE INDUSTRIES OF CALIFORNIA, AND THEIR FUTURE.

Our eastern friends, even many of our own citizens, are constantly predicting the speedy approach of a condition of overproduction and apprehension both at home and abroad has exerted a strong influence in retarding our growth and development. It is time the matter be placed at rest, and the question which confronts us at the outset of this discussion is, what are the facts and what are the most reasonable inferences to be drawn from these facts? Enterprising men everywhere look to the future with the most serene confidence, and when this confidence is challenged we find it to rest in the great commercial proposition that no country has ever yet been ruined by its overfertility or the expanded possibilities of its climate.

The vast diversity of agriculture and horticulture in California gives our industries in competition with the industries of nearly every other zone of the habitable earth. In this diversity our safety lies. As a wheat-producing country alone we would share the vicissitudes of the wheat zones of the earth. Failure of crops or of prices would upon us constantly recurring years of loss, but our climate and the production of every object of cultivation grown on the earth is of Europe. The list embraces many articles which have but a limited area of production on the earth, and, fortunately for us, many articles are in the list of those which cannot be produced by other countries sustaining the largest populations of the world.

Let us take first the question of citrus fruit. That industry in California is still in its infancy, notwithstanding it has long since passed its experimental stage. Citrus fruits are now produced in considerable quantities. Thirty years ago there was imported into the United States three hundred thousand boxes of citrus fruit. Last year California contributed to supply the demand six hundred thousand boxes. California contributed seven hundred and eighty thousand boxes to the country into which thirty years ago were imported three hundred thousand boxes of citrus fruit produced within its own borders. One million three hundred and eighty thousand boxes. What are the facts as to importation in the same year? From the report of the Finance Committee, compiled for the use of the Senate of the United States in the discussion of the McKinley bill, and gathered from the most authentic sources, to wit: the Custom House returns of the United States, it is shown and declared that in 1889 there was imported into the United States of citrus fruits three million three hundred

thousand nine hundred and sixty-three boxes, and one hundred and twenty-seven thousand nine hundred and twenty-seven barrels. Thus, notwithstanding the contribution of Florida and California to the supply, the importation of citrus fruits into the United States is more than eleven times that noted prior to the beginning of home production. In the face of these facts, is it competent for any man to predict overproduction of oranges and lemons in California and Florida? The entire demand of the United States thirty years ago was imported. When this country becomes a producer to the extent of one million three hundred and eighty thousand boxes, the importation in the same year has arisen to nearly four million boxes, thus constantly widening the margin in favor of the home producer and forever silencing all objections of overproduction.

I take the liberty of introducing here the testimony of an intelligent representative of Southern California. Major E. W. Jones, President of the Los Angeles Chamber of Commerce, under date of August twenty-first, says:

The citrus culture of Southern California has been successfully prosecuted for so many years as to establish the fact beyond controversy that our climate and soils are adapted to it. Over one hundred years ago the Mission fathers planted orange trees at San Gabriel, ten miles east of Los Angeles, and some of these trees are still living, in spite of a century of neglect. In the past thirty-five years only has citrus culture in California been engaged in as a commercial venture. Sixteen years ago orchardists in the San Gabriel Valley and Los Angeles City found markets for their fruits and realized \$1,200 per acre for oranges. The fruit on about thirty acres was sold at that price. That was the first opportunity for reaching the outside markets. Since then the planting of citrus trees all through Southern California has been going on, until now in Los Angeles alone there are eighteen thousand acres. The shipments of citrus fruit, including lemons and limes, last year were eight hundred and twenty-seven thousand boxes. Southern California. Leading shippers of our section estimate the crop of next year to be four thousand carloads. Markets for the fruits and facilities for reaching them are in greater proportion than the production, while the cost of transportation is continually cheapening.

The second instance to be cited here will relate to raisins. In 1874 California shipped East two hundred pounds of raisins. In 1888 we shipped seven million pounds, and the extent to which we failed to supply some market is fully illustrated by the report of the Finance Committee, already quoted, wherein it is declared that there was actually imported into the United States in the year 1889 thirty-four million three hundred and ninety-three thousand five hundred pounds of raisins. When, therefore, California has trebled its present product of raisins, it will barely equal the importation. To state this in a different way: The volume of importation is twice that of the product of California. Since California contributes to the demand eighteen million pounds at the present rate of production, and since there were, in round numbers, thirty-five million pounds imported, there is, on the present basis of consumption, a perfectly safe and certain demand in the United States for three times the vineyard capacity now existing. We are, therefore, told by the eastern and home objectors that the industry of raisin growing will be overdone, let us remember that the demand will increase, and that the present demand in the United States is three times our present capacity for production. There is, therefore, no danger for three vineyards for every one now cultivated in California. How does the case stand as to grapes and prunes? These will be considered together, simply because they were treated together in the report of the Finance Committee to the Senate. The importation of

these two articles in 1889 was forty-seven million four hundred ninety-three thousand two hundred and ten pounds. Are we in danger of overproducing grapes and prunes while the fiscal report of the nation exhibit this vast volume of importation?

Take even the case of lumber. Those but partially informed naturally conclude that the forests of our country supply all our demands, and yet, in 1889, the report already quoted states that was imported into the United States five hundred and thirty million feet of lumber, the Custom House valuation of which was \$1,050,000. Of olive oil, there was imported into the United States four hundred and fifty-four thousand gallons; of sugar, nine million and twenty-eight thousand pounds; and of wool, one million and thirty-two million eight hundred and seventeen thousand and fifty-six pounds.

Are our industries likely to be overdone while this vast volume of importation of the industries of other countries must be available to supply the home demand? But there is another and a better way to be presented of the future of our leading industries. The following tabular statement presents, under examination, a very hopeful

STATEMENT OF ARTICLES NAMED BELOW EXPORTED FROM CALIFORNIA BY THE PACIFIC COMPANY'S LINES, 1880 TO 1889.

YEAR.	Canned Salmon.	Canned Goods.	Dried Fruits.
1880	15,095,900	10,271,180	590,980
1881	21,409,690	21,181,420	2,377,660
1882	21,134,240	23,627,000	5,158,460
1883	23,060,620	28,488,770	3,329,460
1884	7,804,150	21,695,740	2,103,350
1885	4,945,970	28,949,380	5,794,160
1886	7,400,110	30,636,710	6,113,970
1887	7,287,290	56,009,130	16,648,520
1888	7,130,600	38,728,100	20,237,360
1889	8,022,290	39,313,740	33,132,050

YEAR.	Green Fruit—Citrus.	Raisins.	Nuts.
1880	Not kept.	790,630	37,680
1881	Not kept.	1,721,960	859,500
1882	917,100	1,056,540	397,140
1883	6,718,270	344,050	1,054,970
1884	938,910	3,150,290	871,520
1885	22,476,960	6,203,340	1,762,290
1886	26,907,570	12,970,800	956,230
1887	15,342,340	15,976,500	1,167,670
1888	14,434,490	14,571,380	864,390
1889	20,811,560	17,570,485	1,521,880

Reviewing this table, let it be noted that in 1880 we shipped one hundred and ninety thousand pounds of dried fruit, and that the shipments of 1889 reach over thirty-three millions of pounds, or one hundred and thirty-three times the volume of the shipment of 1880. Thus, we supplied the markets of the East in 1889 sixty-five times the annual volume of 1880. Of green fruit, the amount of shipment in 1889 was five million one hundred and eighty thousand pounds, and in 1880 it was only one hundred and eighty thousand pounds, an increase of over twenty-five times.

shipped nine years before. Of citrus fruits, in 1882 we shipped nine hundred and seventeen thousand pounds, and in 1889, seven years later, the amount had arisen to fully twenty million pounds. In 1880 the shipment of raisins was less than eight hundred thousand pounds, while in 1889 it had reached eighteen million pounds. The shipment of nuts in 1880 was two million eight hundred and eighty thousand pounds, while in 1887 it reached the enormous quantity of thirty-three million pounds. The commercial forces and the industrial conditions, which have conferred upon us this vast increment of exportation, are actively in existence. The analogies all point toward a still greater increase. Upon this subject of the future of the fruit industry of California, I take the liberty of introducing the testimony of an experienced grower and fruit shipper in California. Under date of July twenty-first, 1889, H. Weinstock, a well known merchant and fruit grower of Sacramento, says:

"Suppose the fruit product of California doubled within the next five years, the market be as good as at present, due allowance being made for the growth of the population and growth of market, no unusual cause favoring the market being considered." Taking the past as a guide for the future, my answer to this question would be that the quantity of California fruit can be as profitably and as advantageously shipped five years hence as at present. Though our market, compared with what it was years ago, is wonderfully widened, it is limited as yet compared with the possibilities. There are many towns and cities and places that have not yet seen California green fruit, and who can use quantities of it. The next five years will see a wonderful progress made in connection with fruit culture in many directions. We will have quicker time on freight shipments. We will have more scientifically constructed freight ships. We will have much lower transportation rates. We will have larger quantities of fruit. We will know still better how to pick and pack them. There will be still fiercer competition among fruit buyers in the East, and this keener competition will induce these buyers to send out laterally, so to speak, for trade into every nook and corner of the Rocky Mountains, until California fruits will become as thoroughly distributed in the East as are the oranges of Florida and the grapes of Spain. The markets for green fruits are being increased with remarkable rapidity. Let me repeat this last statement. In the fall of 1886, while in Chicago for the purpose of attending to the serious situation on the fruit question existing at that time, Mr. Washburn Porter, who was regarded as one of the highest authorities on the marketing of California fruits in the East, and who, on being asked why so many carloads of fruit that were rotting in Chicago for the want of buyers were not shipped East, said in reply, "Experience had shown that the Atlantic markets could not handle carloads of fruit, but that all that could be successfully marketed east of Chicago, or even in such great cities as New York and Boston, were daily express lots from Chicago. He said that California was already raising too much fruit, and that we could never hope to successfully market the vast acreage at that time already planted and that must come into bearing the following several years. Fortunately for California, time has shown that the man was a false prophet, that the trouble was not with the market, but the manner in which the market was handled. A change in our method of selling California fruits in the East has brought about a wondrous change in results. Aside from the express lots that were sent on daily from Chicago, but one carload of green fruit was shipped from that point in 1886, and was sold at a loss. In 1887 the method of selling California fruit by auction in the Atlantic cities was first introduced, and that year one hundred and four carloads were sold in Boston and New York at very satisfactory prices. In 1888 two hundred and four carloads were sold in Boston and New York at still more satisfactory prices. In 1889 four hundred carloads were sold in these markets at a higher average of prices than ever before reached in the sale of California fruits, and this year, I am told, eight hundred carloads can be disposed of at equally satisfactory prices.

The facts are, then, that the importation of the products of California has been constantly augmented, that the shipments of our products have increased year by year, and that increase has been attended by a corresponding decrease of rates. Recurring to Mr. Weinstock's testimony, we find that in 1886 one carload of California fruit went to the markets east of Chicago, and was sold at a loss. We find that up to this time in the year 1889, and only four years from the former date, eight hundred carloads were sold in the markets of Boston and New York, at the

highest prices ever realized. There is not a single statement which may be quoted in justification of any apprehension that our industries are in danger of being overdone. On the contrary, we are contributing to human necessities producing the legitimate of human desire, and we are producing these under conditions favorable to their production as in themselves to afford a guarantee of successful competition.

While the foregoing relates chiefly to the production of fruit, conditions influencing other products, and having a direct bearing on their future, are completely analogous. It certainly cannot be denied that our State that its industries are overcrowded, when its products are imported into the United States in a vast volume. It cannot be denied that the industries of our State are overcrowded, when it is remembered that during the year 1889 we imported into California, for the consumption of our own people, \$800,000 worth of eggs, and from \$200,000 worth of poultry. We are large importers of butter, and of pork. And beyond all this, we are very large producers of raw materials, which, sooner or later, will be economically and profitably manufactured here. The exportation of raw material, to become a process of importation. Keeping in view that we are now addressing our eastern friends and answering eastern inquirers, we may say to them, in perfect faith, that our manufactures are largely in their infancy, and the conditions here favor the successful prosecution of manufacturing. In respect of manufactures, we are perhaps behind any or all of the States. Our people are beginning to realize this. We are beginning to understand that, when we ship away from our State raw materials, tanned into leather, and the leather to be converted into footwear, are shipping from us the opportunity of creating wealth, the amount of which is readily measured by the difference between the value of the raw hides and the value of the footwear manufactured from them. Likewise the wool which is raised by our people is shipped in the raw, and we lose the opportunity of adding labor and skill, which would give us the value of the cloth manufactured. At the end of a year's ledger account of the industries of a great commonwealth, the measure of its wealth-producing capacity is the amount of value added to raw material by labor, skill, and intelligently directed industry. The production of breadstuffs is certainly not overdone. We would find it a difficult task to overdo the production of precious metals, the manufacture of iron, or manufactures of lead and copper. Thus, we truthfully proclaim to the world that California offers an opportunity for field culture, manufactures, and mining such as no other country in the Union may claim; that none of the industrial pursuits of any country are even at the meridian of their development; that all, with exception, await the vitalizing influence of enterprising capital and industry.

THE QUESTION OF LABOR.

For many years the people of the world were taught to believe that California was not an inviting field for honest industry in the common labor. This was true of its early history. The difficulties of this State, and the cost of getting here, and the rate paid for labor in this State, were all such as to operate as a discouragement

to the employment of an intelligent, self-respecting European laborer. The competition of Chinese labor was an additional discouragement. But it is only with the labor market of to-day that we are to deal, and while adequate treatment would be beyond the reasonable space allotted to a paper of this kind, some of its most salient features will be considered.

It is a regrettable fact that the unions of skilled laborers are opposed to all efforts to induce their craftsmen to come to this State. Their objection, if we are to trust the expressions of their representatives at conventions, is that the coming of additional men produces a condition of things menacing to the maintenance of high wages. The fundamental error of all this is that growth of population in any country is not hindered by the expansion of its industries and the increase of employment, but rather than its decrease. The coming of additional population to California to engage in any pursuit or undertaking, of any nature whatever, is an unmixed good. The chief obstacle in the Pacific States to the successful prosecution of all enterprise is the sparsity of population. There are economies of production, possible to large populations, which are unknown to thinly settled countries. The best market for the products of every country is the home market. Take the cases already referred to. We ship wool from California, and submit to a reduction in the cost of freight and commission, and we wear the clothing manufactured from that wool, to which has been added the skill and industry which have enriched another country, with the freight cost and commission added to the manufactured article. The difference between the economy of manufacturing at home, therefore, represents the cost of shipping raw material to the place of manufacture and the cost of shipping the manufactured article or clothing back again, and also represents the loss of the opportunity to create wealth by the amount of the difference between the staple and the fabric. This, in our case, constitutes a very large margin in favor of manufactures. Our population is estimated at one million two hundred and fifty thousand. Let us for a moment anticipate the result if that population were doubled, and the population of California stood in the census report at two million five hundred thousand. Would the natural resources of the country be adequate to the employment of its people? In the first place, we should have an accession of one million two hundred and fifty thousand home consumers. We would have double our present capital. We would have double the supporting population for every species of industry and enterprise. The local rates of transportation would at once descend, because the same fixed charges would answer for the new as well as for the present demand; and the net result of that augmentation of population, that enterprise and capital, that addition to every element of civilized life, would be an increase in geometrical rather than arithmetical ratio; the products of all employments would be more than doubled, and the opportunity and condition of the labor of California improved. The chief difficulty of the present is the circumscribed character of labor's opportunity. Give us twice the number of our present cities, or double the population of those already existing, and the facilities of all life would be greatly expanded. The chief difficulty of the present is the irregular character of employment. The fruit industry of our State gives greater proportionate employment to labor than the cereal industry.

I have taken a single instance, but at the same time the most of the irregularity of employments. The vineyard owned by Stanford is the largest in the world. It covers three thousand hundred acres of bearing vines. It is operated under a single and is the largest operation of its kind known. The statistics relating to it would be the equivalent of statistical facts relating to thirty-nine vineyards of one hundred acres each, and the facts follow: Exclusive of any labor employed in planting or grafting vines, the operations of the vineyard require the labor of one hundred and thirty-five men for six months; that is the maximum required for the period of cultivation; then comes the vintage. This requires steady employment of five hundred men every part of two months for three weeks of that period the demand will be for seven hundred men. For steady annual employment, but seventy men are required. Here we have a minimum of annual employment equal to seventy for the period of cultivation one hundred and thirty-five men, and maximum during the vintage of seven hundred men. The maximum is ten times the minimum in this case. There are about two thousand acres of bearing vineyard in this State. Carrying the proportions derived from an exhibit of the great vineyard into the vineyard interests of the State, and the two hundred thousand acre vineyard in this State would give us annual employment for three hundred and fifty men. It will at once be seen that if grape growing was the sole industry of the State, the three thousand five hundred men who would find in it steady employment would be the only labor for the vintage, and they would be grossly inadequate. As already been shown, the vintage requires ten times as many men as the industry affords annual employment. It would be impossible to find the labor of nine men available for a few months in the vintage for one man who might find steady employment. The value of a diversified industry comes into view, and with the accession of new industries become more diversified. In this way, history has repeated itself in every State of this Union. The statistics of employments in every State show an increase of diversity exactly proportional to the volume of population. In their early history, and when population was sparse in the Western States of Indiana, Illinois, etc., the staples of wheat, corn, and pork were the objects of cultivation. As these States have a history of over eighty years; they have covered eight decades; and the testimony of eight census ascertainment is unmistakably that as their populations have increased, the diversification of employments has correspondingly augmented. With us the growth of field culture enables us to achieve our present measure of employment, but we are under serious disadvantage with respect of labor. This disadvantage, however, is rapidly passing away, but the existing condition plainly invites intelligent industry. For the past ten years the conditions of the labor market have been growing better. The influx of the Chinese has been permanently and effectively arrested. The growth of manufactures, which accompanies the growth of the State, with the lapse of each year more steady and more profitable employment to labor.

AREA, POPULATION, AND IRRIGATION.

Up to within a comparatively recent period, the territorial area of California was placed at one hundred and eighty-one thousand square miles, or one hundred and fifteen million acres. A more recent, and perhaps a more accurate demonstration of the fact, places the territorial area at one hundred and fifty-seven thousand square miles, or one hundred and thirty-five million acres. Instituting a comparison with some of the older States, and selecting the State of Ohio, because it is neither the largest nor the smallest, but approximately an average State, and California embraces four times the area of Ohio, the ascertained area of the latter State being twenty-four million six hundred and forty thousand acres. The question of the proportion of the arable land in the State of California to the entire acreage has been much discussed. The pioneer population regarded but a very small portion as suitable for cultivation. Any large areas rejected as possessing no agricultural value whatever in the first decade of American occupation here are now among the most productive and valuable of any lands in the State. The methods of agriculture pursued here are of comparatively recent discovery and practice. Being the result of experiment under climatic conditions wholly different from those obtaining on the Atlantic seaboard, the agriculture of California may be said to be distinctive and peculiar. As now admitted to be applicable to the varying conditions of the different sections of the State, the area of arable land in the State may be presented as follows:

San Joaquin Valley	6,845,280 acres.
Sacramento Valley	5,598,720 acres.
Coast valleys, including Salinas, Napa, Russian River, and Santa Clara. Lands lying between the alluvial lands of the Sacramento Valley and the San Joaquin Valley, and below the line of an equal elevation at two thousand feet	5,000,000 acres.
Between the line of an equal elevation at from two to four thousand feet	6,000,000 acres.
San Joaquin Valley, and below the line of an equal elevation at two thousand feet	7,000,000 acres.
San Joaquin Valley, and below the line of an equal elevation at two thousand feet	3,000,000 acres.
Total	33,444,000 acres.

Thus, the present ascertained area of arable lands aggregates thirty-three million four hundred and forty-four thousand acres. The irrigable area of the San Joaquin Valley by definite ascertainment is five million five hundred and forty-five thousand two hundred and eighty acres. In a large proportion of this area there is sufficient annual rainfall to mature annual crops of cereals, but the acreage above shown as irrigable is irrigable from the watershed of the western flank of the Sierra Nevada Mountains. To this must be added about one million five hundred thousand acres on the west side of the San Joaquin Valley, included from the State Engineer's report as not receiving sufficient annual precipitation of moisture to mature crops of cereals, but irrigable from storage reservoirs in the Coast Range. The acreage of the Sacramento Valley is five million five hundred and ninety-eight thousand seven hundred and twenty acres. This acreage receives sufficient rainfall to mature annual crops of cereals. The Sacramento and the San Joaquin Valleys together comprise 12 per cent of the entire acreage of this State.

Of the arid land south of the Tehachapi not included in the above calculation, there are at least five million acres reclaimable by irrigation.

The possible arable acreage of California may be therefore set at thirty-eight million acres.

Much of the timbered slopes of the Sierra Nevada Mountains, also of the Coast Range, when cleared, are suitable for the production of red clover, timothy, and many of the fruits of the temperate zone. Their timber resources, however, are the source of great wealth. The annual value of the lumber produced in the forests being estimated several years at \$7,000,000 per annum.

There is no portion of California which would not be greatly benefited by the development of systems of irrigation. The valley of the Sacramento, embraced within the provinces of Lombardy, Piedmont, and Val d'Aosta in Italy, comprises five million one hundred and twenty thousand acres, or three hundred and eighty thousand acres less than the arable area of the Sacramento Valley. The two valleys of the Po and the Sacramento have many points in similarity. First, the area is about equal. Second, the single central drainage runs through the entire length of the valley with lateral tributaries from the mountains on both sides. The annual precipitation of rain on the valley of the Po is about twice that of the Sacramento Valley. The river Po has thirty very considerable tributaries. The Sacramento has ten considerable tributaries. The arable area in acreage is in favor of the Sacramento Valley. A close resemblance may be observed between the fertility of the soil, the clemency of winter climate, the tropical heat of the summer, the facilities of transportation to the seaboard, etc., and the contiguity to the seacoast. But with these, parallels cease. The population of the valley of the Po exceeds nine million inhabitants, while the population of the Sacramento is less than two hundred thousand. Over eight million of the population of Italy are registered as engaged in unskilled occupations, or in the production of raw materials, and of these, over half are credited to the valley of the Po. Thus, over four million inhabitants find in the irrigated area profitable employment for their labor, where over a like area in California, depending wholly upon the annual precipitation of rain, two hundred thousand people begin to feel what is called the pressure of population.

Reduced to cultivation by systems of irrigation, and Sacramento and the San Joaquin Valleys could be occupied by twenty millions of people without exceeding the density of the population of the valley of the Po.

Concerning the coast counties, the most considerable valleys are those of Salinas, Santa Clara, Napa, and Sonoma; that is to say, Santa Clara, Napa, and Sonoma present the greatest density of rural population in California. They are under the highest state of cultivation in comparison with the most approved methods of agriculture and horticulture, justified by experience and developed by practice. They are devoted chiefly to the production of wines and fruits, and while wine and fruit growing are not by any means confined to them, they present an excellent illustration of the superior return made to labor by the diligent and intelligent cultivation of that great diversity of products favored by the climate of California. The fruit and the wine products of the year 1888 aggregated in value \$25,000,000. Of this sum, 60 per cent, or \$15,000,000, is to be credited to the three valleys under consideration.

The acreage of California devoted to barley, corn, oats, rye, and wheat aggregates two million five hundred and sixty thousand acres.

due of the product for the year 1888 was \$49,000,000. The acreage devoted to fruit is about two hundred and forty thousand acres, equal to about 9 per cent of the acreage devoted to cereals, and yet the product of the orchards and vineyards was valued at \$25,000,000, or 50 per cent of the value of the crop of cereals for that year.

The distinctively agricultural population, excluding those engaged in stock raising, in this State, is less than one hundred thousand inhabitants, including juvenile members of families and agricultural laborers. The following table, and yet carefully compiled statistics of the value of the product of field culture, excluding fruit, for the year 1888, exhibit the following:

Wheat	\$32,000,000
Cattle and sheep	30,000,000
Barley	10,000,000
Cereals (unspecified)	7,530,000
Wool	5,000,000
Dairy produce	6,000,000
Total	\$90,530,000

The operative mining population of California, including, as above specified, minors and employed laborers, is less than eighty thousand. The product of their labor, compiled from authentic sources, is as follows:

Gold and silver	\$20,000,000
Copper	1,300,000
Iron and lead	1,250,000
Other base metals	1,000,000
Coal	300,000
Total	\$23,850,000

Thus, while the populations engaged in the two classes of industry are approximately the same, the aggregate of the mining product scarcely reaches 30 per cent of the value of the field culture. But if we add to the \$90,530,000 given as the value of the agricultural products of the State for the year 1888, \$25,000,000, the ascertained value of the fruit and wine product, we have \$115,530,000, as the total annual product of field culture, thus reducing the annual output of the mining industry to less than 25 per cent of the value, notwithstanding approximately the same number of people are engaged in the two general classifications of industry.

In the foregoing, the acreage of arable land is estimated at about thirty-nine million acres. The great diversity of product favored by the climate will eventually give employment to a much larger number of people than could find employment upon a similar area in the temperate zones of the United States. The State of Ohio, which has already been used for the purpose of elucidation, which comparison always favors, devoted in the year 1888 three million five hundred and seventy-seven thousand acres to the production of cereals, including all species of field culture, and the population of that State, by the estimates of 1885, was three million seven hundred and twenty-five thousand, or approximately three times the population of California. A cursory comparison with other States of the Union appears to confirm the conclusion quite fully that California has the largest area of land under cultivation, in proportion to its population, of any portion of the civilized world, and that the product of industry per capita is also greater than

that which rewards the industry of any other people. Yet the fertile and the most valuable portions of the arable land of California are wholly unused, owing to the aridity of the climate. This has been the case in the main to San Joaquin Valley. Of the six million eight hundred and forty-five thousand acres of alluvial land in that valley to exceed eight hundred thousand acres have been brought under cultivation.

The irrigable area of the San Joaquin Valley from water now available without storage, is placed at five million eight hundred and fifty thousand two hundred and eighty acres, exceeding the area of the Valley of the Po by over one million seven hundred and twenty thousand acres. The physical features of the San Joaquin Valley present simply a monotonous recurrence of level and exceedingly fertile lands. To say that this vast area of fertile land, lying under a climate favoring the greatest possible diversity of product, is in the infancy of its development, would not be so nearly an accurate presentation as to say that the region is wholly undeveloped.

Generalizing these facts, we have a population of one million hundred thousand inhabitants occupying a territorial area of one hundred and fifty-seven thousand square miles, in which is embraced three million four hundred and forty-four thousand acres of arable land. Upon a less area, in the empire of Japan, thirty-five million people find subsistence, and are living in a state of plenty, and admit of the development of all the higher attributes of civilization. In the valley of the Po, in an area three hundred and eighty thousand acres less than the arable extent of the Sacramento Valley, seven million people find profitable employment for their industries. With boundless resources before us, we may extend a welcome to our countrymen from the more densely settled portions of our country, every assurance that here a great empire of wealth and population awaits only the creative influence of intelligence and enterprise.

THE VALUE OF LAND.

It has been contended, with more or less plausibility, that the price at which the lands are held in California is arresting its growth and development. After an exhaustive inquiry into the subject, I am disposed to think that this charge must be plainly met, and that the real facts must be presented to the world.

Since the year 1869, the extension of railroad lines into unsettled or wholly uninhabited territories of the United States has led to settlement an area so vast as to distribute thinly the great immigration which annually overflows from the more densely populated portions of this country and Europe. The railroad extension has opened vast areas of sparsely settled and uninhabited territory brought these into competition with each other in the field of immigration to settlement. Since that period the State of Kansas received a million of inhabitants, Texas one million six hundred thousand, Minnesota seventy thousand, Dakota six hundred thousand, Nebraska five hundred thousand, Wyoming three hundred thousand, Washington one hundred thousand, Montana one hundred thousand, Arizona fifty thousand, Colorado four hundred thousand, and California, according to the latest report, about five hundred thousand. Of all these, the growth of

has been the most phenomenal. The reason for this is not far to seek. Kansas was more accessible than any of the Pacific Territories, and lands there were cheap. In estimating the obstacles to settlement of a distant region, the cost of reaching that region must occupy a prominent place. It has cost more money in the past to remove a body of population aggregating one hundred thousand men from the more densely populated and overflowing sections of our country to California than to remove one million from the same sections to Kansas and Nebraska. The value of land superficially in California received a high development in advance of the density of population. In common observation, good agricultural land is deemed to have reached its highest point of value at from \$30 to \$50 an acre. A greater density of population, of which we have had no experience in California, will urge these prices up from \$60 to \$75 an acre, and if the lands are as fertile as in Belgium, and the population equally dense with that country, they will reach the value of \$1,000 to \$1,500 an acre. Under these circumstances they become garden lands with immediate home market; but lands in California were sold for from \$30 to \$50 an acre when lands in Kansas and Nebraska could be obtained at the single minimum of \$1 25 an acre, or within railroad limits at \$2 50 an acre. When, therefore, the immigrants had their choice between Kansas, Nebraska, Colorado, Minnesota, and Dakota, where lands could be obtained at \$1 25 an acre at first hand from the Government, or at from \$5 to \$10 an acre at second hand, as against land in California, which was held at from \$15 to \$30 an acre, the immigrant chose the former location, under the somewhat justifiable but mistaken belief that lands in California had reached their full development. I beg to introduce the statement of fact that the average value of agricultural lands in the Sacramento Valley has not yet reached \$25 an acre. The more fertile alluvial lands, suitable for growing fruits, and those in the localities where the fruit is early, and where the environment is peculiarly favorable to fruit growing, are held at a valuation of from \$50 to \$75 an acre. In the pamphlet literature which is distributed from the East, the statement is made that good fruit land can be obtained in California for from \$75 to \$150 an acre.

I am painfully conscious, from personal observation, of the effect this produces on the mind of the eastern agriculturist. Let us illustrate this: The intending emigrant is not content with second class land. He, therefore, contemplates the purchase of the best quality, or the highest figure used in this illustration, \$150. Suppose he has at home one hundred acres which he can sell at \$50 an acre, he will obtain \$10,000 for his farm. He realizes that at \$150 an acre he can purchase in California for this, after paying his expenses to California, say sixty acres. He, therefore, feels to be losing one hundred and forty acres by his change of residence, and there is a spirit of greed in the ownership of the earth's surface which makes this proposition instinctively distasteful. But the figures I have given here are not the maximum figures by any means. In recent pamphlet publications relating to Southern California, it is plainly stated that good orange land can be purchased for \$250 an acre. I read these statements, in the light of personal observation among the people of the East, and, therefore, have a better realization of their deterrent force. The farmer in Iowa with two hundred acres, valuable at from \$40 to \$50 an acre, realizes that the proceeds of the sale of his farm will purchase only one fifth of its area in Southern California.

nia. He must, therefore, content himself with giving up two hundred acres and becoming the proprietor of only forty acres. This is analogous to the condition which existed during the period of the great migration on gold. While California maintained a gold standard, the fortune of eastern people were convertible into greenbacks; but if they came to emigrate to California, they must convert their greenbacks into gold. The farmer who could sell his farm for \$20,000 in greenbacks and removal to California must submit to a reduction of from \$10,000 to \$12,000 on the face value of his money, before he would have the currency recognized by the commerce of this State. However, the case might have been made for the equivalent value of the property which the currency had been converted, the sentimental considerations were against the change, and sentiment is not without influence in the matters of commerce. The reverse of this operated to send our people westward. The man who could raise \$10,000 in gold coin in California, could convert it into \$20,000 of the currency in use in the Eastern States. Subsequent events proved that there was something more than sentiment in this, because the purchasing power of currency evened out to a par with gold. The gain became something more than apparent; it became actual. I declare herein unqualifiedly that the analogy of gold as relates to land, is the chief difficulty in the way of immigration to the State of California. At the same time I declare that this reason is not justified by the real facts of the situation. The lands held at \$50 an acre in California are cheaper than any lands within the boundaries of any of the five great Western States at \$50. It is, however, not our task to justify this statement to the full comprehension of the intending immigrant, or to secure complete acceptance of its truth; but it is within the knowledge of you, gentlemen of the Board of Agriculture, that lands in California which have a ready market value of \$50 an acre, are capable of producing a far better rate of interest on that investment than any lands which may be obtained in the corn, wheat, and stock regions of the West at one third that figure.

In collecting data for this address, I have made extended inquiries into the actual profit obtained from fruit growing in the fruit-growing sections of the State. The instances of a net average profit of \$50 a year continuing for a long period are not rare. Mr. A. T. Hatch, one of the most experienced fruit growers in the State, has given the assurance that the fruit lands of California are yielding a net annual profit from \$50 to \$100 an acre. The fruit product of ninety-seven acres at Vacaville, hanging upon the trees, was sold during the present season for \$18,000 in cash, the payment being made before any of the fruit was removed. About three years ago L. W. Buck, of Vacaville, purchased from Thomas Wilson of that place one hundred and fifty acres of land planted to orchard for \$90,000, being at the rate of \$600 per acre. The trees planted thereon were for the most part in bearing at that time. They are now in full bearing, and the fruit product of this year alone is estimated to be worth \$30,000, or \$200 per acre.

But let us here use the most conservative figures furnished by Mr. A. T. Hatch, and declare that \$50 an acre is the reasonable expectation of profit to the fruit grower. Lands upon which this profit may be realized may be had for \$100 an acre. Here, then, an agricultural investment which returns a net annual profit of one half the cost of the value of the land. It is, or should be, well known to you, as it

known to the cultivators of the soil in the great agricultural States of the West, that an annual profit of from 6 to 10 per cent would be regarded an extremely satisfactory result on the lands valued at from \$30 to \$50 an acre. But there are large areas of land in California which may be purchased for from \$30 to \$40 an acre, and which, if devoted to those productions permitted by the higher possibilities of climate, could make them worth from \$300 to \$500 an acre within a short period of time. When the eastern mind has accepted the conclusion that which the people of California have contended for many years, the increase of population will be as rapid as has been observed in the Western States. When it is understood that lands which may be purchased for \$50 an acre are easily susceptible of becoming worth three or four times that sum, and that lands valued at \$100 per acre may readily become worth \$500 an acre, the intending immigrant will be no longer deterred from casting his lot with us because the number of his acres must be diminished. The true standard of estimation of the value of land is not by any unit of area, but by the unit of fertility, and by the standard of units relating to the possibility of a higher use for the land. Acres may express the extent of surface, but when value is under consideration, climate possibilities and fertility are the controlling factors. The true method of determining values is by productiveness rather than surface extent.

A recapitulation of the foregoing considerations presents our State as in the very infancy of its development. The industries upon which we are founding a commonwealth have had less than twenty years of history.

We have but recently, even but now, acquired that intelligent perception of our environment which will enable us to avail of the higher possibilities of our soil and climate.

We are no longer remote, in a commercial aspect, from the great centers of commercial activity.

Economic methods of communication have conferred upon us the equivalent of physical contiguity with the rest of the world.

More intelligent methods of agriculture, improved conditions of the labor market, combined with the constant decrease in the cost of transportation, afford assurances of the permanency of all our industries.

Our State has a territorial area of one hundred and fifty-seven thousand square miles, comprising an arable area of thirty-five millions of acres, capable of supporting ten times the population now in occupancy. We have a climate which admits of the economies of production as applicable to every industry, and confers upon us the broadest diversity of production and the largest future possibilities. We have large areas of land under the conditions of primitive development as to value.

These facts constitute in themselves a strong invitation to the homeseekers among our countrymen.

The love of Californians for their State, which is proverbial throughout the world, has ample justification. Where else on the earth is there more inspiring cause for love for one's country? In what other country is there broader freedom of thought and action? In what other country are the alluring prophecies, which attend the hopes of young men, more certain of fulfillment, or in what other country do greater blessings of peace and plenty minister to the comforts of age? In what other country is honest industry more respected, or does labor earn a

higher meed of profit and honor? Under our summer suns the of the tropics ripen without the torrid rigors of the equator. The russet brown of our summer hills and the golden stubble after harvest are the only winter we know. Here the verdure of ushers in the autumn, and the autumn brings no forewarning of the discomforts of winter. Here winter is the season when the warm earth is turned by the plow for the seed time, and spring, with its green and ripening grain, is opulent with the fruition of hopeful harvest. Nor are these all the attributes which challenge our love. Here Nature has wrought its best enchantment in the sublimity of mountain peaks, the bold grandeur of cliffs, the pensive peacefulness of lovely valleys, and the expansive splendor of fertile plains.

Looking backward, we see a history founded in the romance of the future. In the present, we are laying the foundations of a noble country, wealth by the establishment of permanent industries. If our devotion attends upon our love, and high endeavor is the inspiration of our pride, they will ripen for our beloved State its growing harvest of hope.

THE SIXTH CONGRESSIONAL CITRUS FAIR.

The formal opening of the State Citrus Fair, Tuesday evening, March 1890, at Los Angeles City, was an interesting occasion, and will long be remembered by those who had the pleasure of being present.

The display was ready for exhibition right on schedule time. Punctuality had been for once insured in a public exhibition. In requiring the managers to make their awards before the opening, the management made certain that every competitor for premiums would have his exhibit ready four hours before the doors were opened to the general public.

It was, undoubtedly, the finest exhibit of citrus fruits ever displayed in the world. The pavilion blazed with the golden fruit. The decorations of the immense building were subordinated to the main purpose of the exhibition—the massive and unadorned display of the fruit of the orange and lemon tree. One glance was enough to make the visitor fully realize the wealth of productive resources the exhibit represented.

At eight o'clock, the hour fixed for the formal opening, C. M. Wells, President of the Executive Committee, introduced Hon. J. De Witt Shorb, who delivered the following address:

CHAIRMAN, LADIES AND GENTLEMEN: A few years only had passed away when people were startled by the announcement that a Citrus Fair was to be held. I use the word startled, because at that time only a few of us knew that this industry had so progressed, or had reached the stage of development when a fair was justified to specially exhibit its products.

Beyond the San Francisco and Oregon markets but few of our oranges ever reached, and in commercial quantities, and we ourselves were ignorant of our grand possibilities. Following immediately that fair the interest of our producers was aroused, discussions were held, results obtained and recorded, trees were planted, new markets were opened, now several thousand carloads of oranges are shipped annually from our groves in the State of a few thousand boxes then. Then, as now, I was selected to deliver the so called opening address; then, as now, I felt the responsibility of the occasion, and endeavored to avoid all misleading statements. Guided by my own experience and led by the lights of my understanding, I endeavored to fairly present this industry to our people, and cast a prophetic eye into the future and its importance to our section.

In an address delivered at Riverside some years ago, taking as my subject the one suggested by the Committee of Arrangements: "The comparative value of grape growing, raisins, and orange growing, taking the markets of the future as a basis of comparison," I then said, what results have shown to have been a wise prediction, viz.: that the orange, as a local industry, is more important to us than the grape; that while peculiarly our own of Southern California, the latter belongs to the State. There are millions of acres adapted to grape culture from Shasta to San Diego, the area upon which the citrus cultivation can be safely followed is very limited indeed. Now gentlemen in the northern counties will think my judgment in error, but the future will, I think, sustain this opinion, and they may thank me for so candid an expression of it."

In expressing this my deliberate judgment then, based on study, observation, and science, I was influenced by no sectional prejudice, or fear of successful competition, and in quoting what I have done I desire to evoke any unkindly feelings now between the northern and southern portions of our State. I deprecate, on the part of individuals or papers, any language that would serve to create sectional ill feeling among the people of California, or weaken the strong ties of Statehood which at one time characterized our people. For me, California is long enough, broad enough, and grand enough, sufficiently diversified in her great interests to suggest the possibility of pleasing one seeking a home among us, and if a section for awhile receives a few more good grants than would seem to be its share, why, let the others be content and "wait until the tide." Their time is sure to come. After saying this much, I may be deemed in quoting a little more from the same address. If I was correct then in the

statements made, surely it is as important now to impress them on my readers:

"In the southern Atlantic States the isothermal lines have undergone many changes. Orange groves in Louisiana, once flourishing and productive, have ceased to bear. The trees live and that is all. In Florida, in and around Jacksonville where once flourished the largest and best paying groves, no young trees can be planted, nor is it safe or a certainty north of a line seventy miles south of that point."

Nor is it at all probable that the great climatic changes should be confined to the Atlantic States. May not the same changes occur here as in Louisiana and Florida?

The late cold weather and reported destruction of trees in the northern part of this State would seem to answer this question in the affirmative.

From the East we have recent reports of excessive cold and consequent destruction of the fruit buds, and certain loss of the ensuing crops. While to us such reports are distressing, yet as a matter of fact, the fruit growers distributed all over the State of California, are subject to such periodical visitations, and have learned by sad experience, if they succeed in obtaining one crop out of three they are fortunate indeed.

It may not be out of place should I ask these many producers to calmly weigh their surroundings and determine if in their struggle for life they are able to continue on in the struggle, where the chances are at least against them. It may not be wiser to come to California, where all the conditions are favorable and the climate is almost unknown? In the East forbidding nature in rigorous seasons and commotions of the air are warning people away. The continent offers only a refuge from the extremes of heat and cold, the destruction wrought by storms and uncertainty of fickle seasons, and that refuge is here.

This may be considered as an advertising address, and perforce it may attract criticism, but if, in what I may say, I induce the producers to benefit themselves by coming to California to aid in its greater development, I cannot see much to be apologized for.

To my friends in the southern portion of this State, and to those whose lines are in as pleasant places, I sound a note of warning. It must not be supposed because the south of Tehachapi Mountains that therefore we can plant with impunity any tree *everywhere*, and rest secure in the hope that we may some day expect from our labor and investment. While climate is an absolute prerequisite for the citrus industry, yet it is by no means the only condition that needs our consideration in establishing an orchard. Possibly in no other portions of the world, where good soils so generally exist, can you also find so great a diversity of mechanical or physical construction of soils. Within the small area of one acre, and even in much smaller subdivisions, may be found the obdurate adobe, the clayey, sandy, or gravelly loams; the cold, damp, or warm soils; the soils to correspond.

All of these conditions should be carefully considered by the fruit grower, but are to him of prime importance. They would seem to emphasize the truth of the saying, "Put not all your eggs in one basket," and that diversity of planting is all the safest policy.

Nature in her wise providence has wisely adjusted everything in the vegetable and animal kingdoms to the conditions of the soil, and united the conditions, as she has adjusted the covering of the polar bear for the ice and the Arctic region.

While the genius of man is almost illimitable, while great natural conditions made in some measure to yield to his will and undergo certain modifications, all this power he can't make the banana fruit in the Arctic regions, or the mango spring up under the equator, any more than he can change the laws of our earth to bring the earth nearer the sun, or cause it to receive at a different angle the sun's heat.

I would earnestly advise careful study into all conditions of soil and subsoil before planting any kind of trees, and if the party proposing to plant is not familiar with the proper conditions, let him take the advice of some one who does know.

The great advantage of occasions of this kind is the opportunity afforded for comparison. The practical results of soils, cultivation, and irrigation on the fruit seen here in striking contrast, a study difficult to make elsewhere.

I may be pardoned in this connection if I suggest a matter of importance to be appointed to pass judgment on the fruit offered in competition here and to award prizes.

Assured that no sectional prejudice will influence their judgments, I would advise that they consider only the quality and character of the fruits exhibited on a purely commercial basis, what position they must take in the markets of the State. What producers want to know, is: What kind of fruit is of the highest value, that which will bring the highest price and quickest sales, and what is the best way to produce it. Upon this, and only this, depends the fruition of their hopes, the future of the industry, and the wealth of this section. While unique or artistic forms of displays may possibly merit commendations of the Judges, while the praise the zeal, industry, and artistic tastes of the exhibitor, they should never be the main question: What is best in a commercial sense? This is the purpose of this fair, the lessons to be learned, and upon the Judges rest the grave responsibility of the teachers.

am continuously assailed by the question, coming oftentimes from very intelligent gentlemen, "Don't you think this orange business will be overdone? Don't you think, when all the new trees lately planted come into bearing, that the markets will be overstocked, that the prices will fall below the cost of profitable production?" I have but one answer: No.

The universal law of supply and demand is the basis of this judgment. There are many important factors that deserve consideration in forming this opinion.

Beyond all other fruits the taste or cravings of children for the orange is preëminent; I am I sure this peculiarity is confined to children. Once enjoyed, a child never forgets how delicious the orange tasted; nor does long abstinence from its further enjoyment render the sense of deprivation less keen. Any sensible child will cry for an orange; nor will they give their parents or guardians any peace until their righteous desire is gratified and their craving appeased. Children who are raised among oranges always prefer this fruit to all others. The universality of this taste has an important bearing in the matter of consumption.

As a rule consumption increases faster than production; and this rule should apply to the orange industry, because the area upon which it can be grown is so very limited, and the population is so great and so rapidly increasing. The use of anything, either in the way of raiment, food, or drink, belonging to civilized life, and which by its nature is regarded as non-essential or a luxury, soon becomes a matter of necessity. What our forefathers rightly regarded as luxuries, and indulged in sparingly or only occasionally, belong to our every day lives, and to do without which would occasion us grave discomfort, if not absolute unhappiness. Once a community imports oranges, you may be sure it will continue to do so.

The enterprise of this age has possibly the highest expression in railroad building. Each day new lines are projected, and before you know it they are built and completed. Millions removed thousands of miles from all centers of trade and commerce—in fact, the outlying lines of civilization—are fast becoming united by lines of roads to the great national systems, and hence forming important factors as consumers of our productions. Railroads and quick dispatch make near markets of regions far removed in miles. If they would only lessen their charges in the proportion that they open up new markets, I would feel better pleased with the railroad managers.

Therefore think, taking all these factors into consideration, we may have no grounds for the fear of overproduction.

It may not be that we will always enjoy so great an income from our orchards as we now do; but we can afford to have our returns per acre very materially reduced, and still receive more money than any other class of farmers in any other portion of the Union. Our producers should learn one lesson; and the sooner it is learned the better for their happiness and that of the State. They must look about them and consider how they can make a living, and not be indulging in idle day dreams of how to make a fortune out of nothing. An honest competency, or a living without the necessity of excessive or unending work, is, after all, the greatest measure of success that most of us are capable of accomplishing; and, this achieved, it should make us contented. Fortunes only a very few secure in the race of life; nor is this condition always attended with the greatest happiness.

The so called boom was an unqualified curse to our section and people. From producers we soon became speculators and promoters. We forgot that labor, and persistent effort, is the only reliable source of comfort and independence; and that the solid wealth of all countries is confined to its productions and their profitable sale or exchange.

It may be hoped the sad lesson we have learned will not be forgotten; that our people will go to work again earnestly, and, producing within themselves most of what they consume, and selling all they can, soon repair all the evils of the past. But surely the times are out of joint, and something must be radically wrong, when San Francisco is compelled to purchase, out of the State, between two and three million dollars worth of goods to satisfy her annual consumption, and Los Angeles and Pasadena import their potatoes and fowls from Iowa and Kansas.

While an earnest friend and strong advocate, and claiming for our country all it may be proud of; while I have no fears of its ultimate great destiny, yet it must not be forgotten, with all our great natural advantages, that much depends upon ourselves. One cannot live in a cabin, built on a mineral ledge in sight, bristling with gold, and of inestimable value, and unless he used some means of extracting the precious metal, he might as well be without the necessities of life.

History has taught us one lesson, that the success and glory of an age or people depends not on the use the human mind makes of the resources that subserve the ends of civilization, but upon the abundance of the resources themselves.

At the conclusion of Mr. Shorb's address, Mr. Wells then introduced Governor Waterman, who spoke for a few minutes of California and its fruit products. At the conclusion of his remarks, he declared the Fair formally open to the public.

The cash premiums, amounting to \$2,500, were appropriated for the purpose by the State, and had been classed by the Executive Fair Committee under the following heads (open to producers only):

CLASS I.

For best exhibit of citrus fruits from any county:

First premium
 Second premium
 Third premium

CLASS II.

For best exhibit of citrus fruits from any locality:

First premium
 Second premium
 Third premium

CLASS III.

For best exhibit by an individual of Washington Navel oranges:

First premium
 Second premium
 Third premium

CLASS IV.

For best exhibit by an individual of budded oranges, other than Washington:

First premium
 Second premium
 Third premium

CLASS V.

For best exhibit by an individual of seedling oranges:

First premium
 Second premium
 Third premium

CLASS VI.

For best exhibit by an individual of budded lemons:

First premium
 Second premium
 Third premium

CLASS VII.

For best specimen, not less than one box, of Washington Navel oranges:

First premium
 Second premium

CLASS VIII.

For best variety of budded lemons, not less than one box:

First premium
 Second premium

CLASS IX.

For best variety of late budded oranges, not less than one box:

Premium

CLASS X.

For best exhibit of Japanese varieties of oranges:

First premium
 Second premium

CLASS XI.

For best exhibit of limes:

Premium

CLASS XII.

For best exhibit of citron:

Premium

CLASS XIII.

For best exhibit of shaddock or pomaloes:

Premium

CLASS XIV.

For best exhibit of orange wine, by maker:

Premium

Nuts, olive oil, olives, dried fruits, and raisins were received on exhibition, but no premium was offered.

The number of entries for competition under the various classes was six hundred and forty-four.

Under Class 1 the following counties made entries: San Diego, Orange, Santa Barbara, San Bernardino, Ventura, and Los Angeles.

Class 2 (localities) had the following entries: Alhambra, Pomona, Anaheim, Pasadena, Redlands, Riverside, Highlands, Cahuenga, Monterey, Santa Anita, Santa Paula, San Gabriel, Ontario, Santa Ana, Yuba, and Downey.

Class 3 had thirty-two entries; Class 4 had thirty-six entries; Class 5 had twenty-eight entries; Class 6 had fourteen entries; Class 7 had twenty-seven entries; Class 8 had thirty-four entries; Class 9 had twenty-seven entries; Class 10 had two entries; Class 11 had six entries; Class 12 had three entries; Class 13 had two entries; Class 14 had six entries.

The Judges were governed in their decisions on awards by the following rules, adopted by the Executive Committee:

First—All persons appointed as Judges will please report to the Secretary at Hazard's Hotel promptly at 1:30 o'clock P. M., Tuesday, March eleventh, when members of the various committees can be introduced to each other and instructions given in regard to their respective duties.

Second—A majority of each committee present will constitute a quorum, and they will be prepared to enter upon the discharge of their duties at 2 o'clock P. M., Tuesday, March eleventh, promptly, and continue their work until their award is made.

Third—While Judges are at liberty to formulate their own rules for judging exhibits, it is respectfully suggested that in Classes 1, 2, 3, 4, 5, and 6, quality of fruit and its general commercial value should take precedence over mere display or arrangement. Classes 7, 8, and 9 should also be judged under the usual rules giving precedence to all those qualities that make the fruit most valuable to producer and consumer. All other classes may be judged from general appearance only.

Fourth—When the Judges of Miscellaneous Exhibits find anything specially worthy, they will please recommend the same to the Executive Committee for such special premium as the Executive Committee may find themselves able to award.

Fifth—The Judges will please make their reports in writing, signed by at least a majority of the Awarding Committee, and place them in the hands of the Superintendent as soon as made, and not later than 10 o'clock A. M., Wednesday, March twelfth.

Sixth—Hon. J. De Barth Shorb is appointed Chairman of the Board of Judges, to whom all questions that may arise are referred for decision, and in the event of a tie in the judgment of any of the Awarding Committees he shall have the casting vote, and his decision be final and conclusive.

The Judges were instructed to make their awards, guided by the following "points" adopted by the Executive Committee:

LEMONS.

First—Appearance, including size of lemon and quality of rind.

Second—Bitterness.

Third—Percentage of acidity.

Fourth—Thinness of rind.

ORANGES.

First—Size, 1 to 10. Standard $2\frac{1}{2}$ to 3 inches, with one point off for every one eighth less than $2\frac{1}{2}$ inches; nothing credited for over size.

Second—General appearance, 1 to 20. Freedom from all blemishes, as rust, scale, decay, and lack of properly cut stem.

Third—Weight, 1 to 15. Should sink in water. Points deducted according to buoyancy.

Fourth—Thickness of peel, 1 to 10. Standard one eighth inch thick or less. Two points for each additional one sixteenth of an inch.

Fifth—Absence of rag, 1 to 10. Standard one eighth inch diameter of core. Segments should be tender.

Sixth—Absence of seed, 1 to 10. Standard seedless.

Seventh—Flavor, 1 to 25. Judged by satisfactory taste.

The awards as reported by the Judges of the several classes follows:

Class 1—Best county exhibit: First, San Bernardino County, \$500; second, San Diego County, \$200; third, San Bernardino County, \$150. Judges, J. H. Kellum, C. Loop, Nathan W. Blanchard, Clark Minor, Albert S. White.

Class 2—Best exhibit from a locality: First, Riverside, \$200; second, Redlands, \$150; third, Ontario, \$75; also recommend diploma to Highlands; Duarte worthy of mention. Judges, H. L. Drew, H. C. Ford, A. F. Kercheval, S. Littlefield.

Class 3—Best exhibit of Washington Navels: First, W. H. Backus, Riverside, \$150; second, F. Q. Storey, Alhambra, \$75; third, Thomas Bakewell, Riverside, \$50; fourth, W. B. Ogden and C. E. Packard, of Riverside. Judges, J. De Barth Shorb, Rudisill, J. R. Dobbins.

Class 4—Best exhibit of budded oranges other than Washington Navels: First, Castleman, Riverside, \$150; second, John Boyd, Riverside, \$75; third, W. H. Backus, \$50. Judges, J. De Barth Shorb, Chas. Frankish, R. H. Gilman.

Class 5—Best exhibit of seedlings: First, C. E. Packard, Riverside, \$150; second, H. Randall, Highlands, \$75; third, E. Watson, Duarte, \$50. Diploma: E. J. Watson. Judges, Stoddard Jess, Theo. Pinthar.

Class 6—Best exhibit of budded lemons: First, G. H. Garcelon, Riverside, \$150; second, A. D. Haight, Riverside, \$50; third, Nathan W. Blanchard, Santa Ana, \$25. Diplomas: J. C. Frisbie, San Diego; A. R. Meserve, Pomona. Judges, Geo. H. C. E. White, James P. Jones.

Class 7—Best specimens of Washington Navels: First, A. C. Thompson, Duarte, \$150; second, H. A. Peels, Riverside, \$25. Diplomas: W. H. Young, Duarte; C. E. and W. H. Backus, Riverside. Judges, H. J. Rudisill, J. R. Dobbins.

Class 8—Best variety of budded lemons: First, the Lisbon, G. W. Garcelon, \$50; second, the Eureka, E. M. Hatch, Ontario, \$25. Diplomas: H. C. Darling, P. Floyd, Ontario. Judges, George H. Crafts, J. P. Jones, C. E. White.

Class 9—Best variety of budded oranges: First, W. H. Newhall, Duarte, \$150; second, Sweets, \$25. Judges, R. H. Gilman, Charles Frankish.

Class 10—Best exhibit of Japanese varieties of oranges: First, F. Q. Storey, Alhambra, \$150; second, C. M. Caldwell, Carpinteria, \$10. Diplomas: Theo. Pinthar, Santa Ana; W. A. Hayne, Montecito. Judges, O. H. Conger, Stoddard Jess.

Class 11—Best exhibit of limes: First, J. W. Doran, Old San Bernardino, \$10. Diplomas: A. C. Thompson and John Scott, Duarte. Judges, O. H. Conger, Stoddard Jess.

Class 12—Best exhibit of citrons: First, Theo. Pinthar, Santa Ana, \$5. Diploma: Kenny, Santa Barbara. Judges, O. H. Conger, Stoddard Jess.

Class 13—Best exhibit of pomalo: First, C. H. McKeivitt, Santa Paula, \$5. Diploma: E. Watson, Duarte. Judges, O. H. Conger, Stoddard Jess.

Class 14—Best exhibit of orange wine by maker: First, George Merrill, Duarte. Diploma: E. J. Baldwin, Santa Anita. Judges, L. Schorm, A. C. Fish, F. Q. Storey.

The fair closed Saturday evening, March fifteenth, having been the most thoroughly successful undertaking of its kind ever held in Southern California. "The jealousy of sectional feeling," which it was feared would interfere with the enterprise, failed to put in an appearance. Perfect harmony prevailed to the end, and the decision of the Judges was accepted with perfectly good grace all around. The attendance was large from the very beginning, and the public was thoroughly satisfied of the magnificent display.

The total attendance at the fair through the four days and nights that it continued was estimated at twenty thousand people.

The Treasurer, Eugene Germain, Esq., reported:

Total receipts	.....
Total expense	.....
Balance on hand	.....

The success of this fair has resulted as a grand incentive to the advancement of citrus fruit culture in the southern counties. No money ever appropriated by the State for any purpose has yielded so immense and immediate returns to the people as has the appropriation of \$2,500 for the exhibit of citrus fruits in the Sixth Congressional District.

CITRUS FAIR FOR NORTHERN CALIFORNIA.

HELD AT MARYSVILLE, JANUARY 12-19, 1891.

At a meeting of the Executive Committee of the Citrus Fair Committee of Arrangements, held February 9, 1891, the following reports were read, showing in detail the receipts and disbursements, which the following is a synopsis:

STATEMENT OF RECEIPTS AND EXPENDITURES STATE CITRUS FAIR, JANUARY 12-19, 1891.

<i>Receipts.</i>	
County subscriptions, Yuba and Sutter	\$1,000 00
Individual subscriptions	1,088 00
Subscribers' tickets	980 00
Receipts	3,158 60
Broad excursions	1,768 50
Cost of lumber and freight collected	176 00
Cost of oranges	593 40
Prizes from State	2,500 00
Prizes on exhibits	336 00
Total	\$11,598 50
<i>Expenditures.</i>	
Prizes awarded	\$2,535 00
Printing	192 80
Entertainment and accommodations	437 40
Excursions	1,548 60
Station	150 00
Trunks	275 45
Citrus fruits	1,165 37
Freight and cartage	156 89
Music	541 60
Miscellaneous	74 80
"Appeal" special edition, ten thousand copies	246 00
Advertising in newspapers	502 05
Posters, bill sticking, hangers, and miscellaneous advertising	783 47
Number	366 17
Greens, etc.	155 00
Hardware	310 68
Light	123 21
Miscellaneous decorations	234 25
Door	852 95
aries	415 65
Total expenditures	\$11,071 94
Surplus	526 56
Grand total	\$11,598 50

John C. White, as Chairman of the Advertising Committee, read a detailed statement of the expenditures of that committee. He presented vouchers and figures showing that the contract with the "Appeal" for the printing and distribution of ten thousand copies of the citrus edition had been fully complied with.

Remarks were made by a number of those present, complimenting

the fair managers, and the following resolutions were unanimously adopted:

Resolved, That the thanks of the committee be tendered to our President for his executive ability and indefatigable energy displayed by him in carrying to a successful issue the State Citrus Fair; and further, that we also tender our thanks to the executive officers who have carried out the various duties assigned to them with discretion and satisfaction.

Resolved, That the thanks of the committee be tendered to General Manager Skinner, for his intelligent and untiring efforts in promoting the success of every movement of the fair.

Resolved, That the thanks of the committee be tendered to our prompt and efficient Treasurer, G. W. Peacock, who so carefully guarded the funds of the association.

Resolved, That the thanks of the committee be tendered to J. C. White and J. H. Murphy, for their untiring efforts in procuring accommodations for visiting strangers.

Resolved, That the thanks of the people of Northern California are due to the ladies of Marysville and Sutter County who so faithfully and ably assisted in beautifying the pavilion.

Resolved, That the thanks of the association be tendered to W. A. Lawson, for his able support and assistance, which added much to the success of the fair.

The matter of disposing of the surplus was discussed. J. C. White said that there were two propositions. First, to keep the money making exhibits at future fairs, and second, to contract with an illustrated paper for a special edition for eastern circulation, containing cuts and descriptions of the fair, and articles pertaining to Yuba and Sutter Counties.

A. F. Abbott said the chief object of the fair was to advertise the country, and he believed the surplus should be so expended as to further carry out that idea.

On motion, the Printing and Advertising Committee was authorized to expend the surplus according to their best judgment. It was understood that they will use \$400 of it in buying a large number of copies of the illustrated paper, the "Great West," to be generally circulated throughout the Eastern States.

In offering the resolution complimentary to the ladies, James O. White, Jr., grew eloquent and paid a high tribute to the ladies who did so much towards beautifying the pavilion. He dwelt at some length upon the amount of work they did, and stated that the attractiveness of the fair was mainly due to their efforts.

The sentiment was expressed that an effort should be made by the President Rideout appointed one of the seven California Directors of the World's Fair.

It was decided to preserve the organization of the committee, and adjournment was made subject to the call of the President.

Superintendent O'Brien's report contained the following items of material used in the decorations, showing the magnitude of the work involved: 1,650,000 tacks; 22,000 feet of fine wire; 25,600 wire nails; 95,000 oranges; 95,000 wire nails; 120,000 oranges; 5,900 lemons; 1,500 pounds of dried figs; 9,000 small red apples; 2,700 osage oranges; 150 pounds of yellow corn in the ear; one and one half miles of green rope; 924,000 gallons of water pumped by the mill; 142 incandescent lights, and 10 arc lights. The lights burned sixty-three hours all, during the fair.

The following figures show the gate receipts for each day of the fair:

Monday	\$54 35
Tuesday	203 45
Wednesday	507 90
Thursday	541 85
Friday	466 40
Saturday	1,147 05
Sunday	95 75
Monday	142 85
Total	\$3,159 60

The receipts of Saturday alone nearly equaled those of the entire week at the last Oroville Citrus Fair, where the admission was fifty cents, and the number of visitors here on Saturday was in excess of the total number of visitors to the Oroville fair.

THE FRENCH PRUNE IN CALIFORNIA

By HON. JOS. ROUTIER, of Routier's Station, Sacramento Co.

Eight years ago, actuated by the desire of doing something to the benefit of California at large, I wrote an article on French prunes, explaining how easily a good living and even a competency could be made, by the cultivation of that excellent fruit from four acres of ground. What I said at that time, is true to every particular; the result of last year's crop was above the most guine expectations.

The only difference of importance in that industry now, is the value of the land. The good sandy bottom land, which could be had then for \$100, is worth now \$300 per acre, and the first class land is worth \$100 per acre, and sometimes a good deal more. All that it will pay yet, and largely, to plant the prune d'Agen, and make what we call the California prune.

I found out, by the experience of the last few years, that the prune is more prolific on peach stalk than on plum stalk, and that on apricot trees, and almond trees make a very profitable orchard after being grafted. I grafted trees ten years old, and the year I got a large crop, and had it for over twelve years without failure.

I would recommend, on poor and dry soil, the planting of hardy almonds, seeds about twenty-four feet apart, and would let them grow for three years and then graft them with prunes. The result will show anybody.

The last two years the eastern buyers of prunes preferred them unwashed. I suppose they wash them East and gain weight. There is no danger of the market getting overstocked, for, our prunes have only been eaten by the rich. We can raise them at 4 cents per pound and make money, and they can be shipped and retailed at 6 or 7 cents, and then we would be able to supply the demand.

I cannot do any better to-day than to renew the information and directions I gave a few years ago, with a good deal more of facts attached to them, as the experience and the returns of the last few years have proved that our expectations, great as they were, did not fall to the magnitude of the result.

One of the best points on raising California prunes, is that it does not need to be as near a market as for raising peaches, plums, or apples. You take your time, and when you have finished your drying the market can hunt the market, or rather the market will come to you, and it is known that you have a first class article for sale.

My valuations a few years ago were made exclusively for rich bottom land; to-day I am prepared to recommend the planting of the prune tree on what is called the timber land, without irrigation

any land, even the prairie land, would bear a good crop. On timber land, plant twenty-four feet apart on plum, almond, or peach. I know a neighbor of mine who, out of very ordinary upland, or timber land, has been raising more than \$200 worth of prunes to the acre for the last two years, and he is now turning every peach tree, apricot tree, and almond tree on his place into a prune tree, and he is inclined to dig up his wine grapevines and replace them also with the prune tree.

There is no doubt that ten acres of bottom land, planted in prunes, will return every year from \$4,000 to \$5,000, and that twenty acres of timber land will return the same amount.

For the information of the new beginner, in reference to the planting, cultivation, and gathering of this most valuable product of the orchard, I reproduce this former article herein, believing it will be of value to those interested:

THE FRENCH PRUNE, OR PETITE D'AGEN—EXTRAORDINARY PROFIT OF THAT INDUSTRY IN CALIFORNIA, PARTICULARLY IN SACRAMENTO COUNTY AND COUNTIES SURROUNDING.

California is certainly the paradise of the fruit grower. A fortune can be made in ten years from a fruit ranch of eighty acres, or even of forty acres, mostly by anybody blessed with that amount of good land. Now, I will demonstrate how any enterprising man, with a very limited capital, can also make himself and family very comfortable, and be rich, with ten acres of bottom land, if planted in French prunes, or *Petite d'Agen* prunes, which is the same thing.

The trees must be grafted or budded on plum stock, and be one or two years old—I mean one-year old trees. They must be planted about twenty-one feet apart, so it will be one hundred trees per acre. Good trees ought to be had for 20 cents apiece, or by the thousand for fifteen cents. The holes must be dug from two to three feet square, according to quality of the soil.

The fourth season after planting, and even the third if your trees have been well taken care of, you will obtain about ten pounds of prunes to each tree, enough to initiate your business. The fifth year you will get about sixty pounds to each tree. The sixth year one hundred and twenty pounds or more to the tree. After that your trees are in full bearing, producing, according to location and care, from one hundred to fifty to three hundred pounds to the tree.

The only trouble now is the drying of the prunes in a satisfactory manner, without spending thousands of dollars in building driers. Driers are a necessity in Oregon, or other wet country, but here in California we can dry the French prunes to perfection without driers; sometimes in one week, and more generally in two weeks, in following instructions:

Do not pick the prunes by hand, as they do not ripen all at the same time, but in about two weeks. Begin to shake your trees towards the twentieth of August, then every week after, and on the fourth time pick them clean.

Now for drying. The only apparatus needed is an iron kettle holding from twenty-five to fifty gallons of water. To each twenty gallons of water add one pound of the best American concentrated lye; have the water boiling, then take a wire basket of some kind, the home-made one will do best; put twenty pounds of green prunes in your basket, dip them in the boiling kettle, let them remain in there about one minute, till you perceive that the skins of your prunes are cracked all over; then take them out and lay them on a tray, and in one week or ten days, according to the heat of the sun, your prunes will be dried enough to put them loose in any kind of boxes holding fifty or twenty-five pounds. The trays can be made very cheaply (about 10 cents each) with sawed redwood shakes three feet long, nailed on a very primitive frame, by anybody who ever used a saw and hammer.

Now, when your prunes are all dried and you want to give them the finishing gloss for the market, do as follows: Fill your kettle again with water, but this time no lye is added, and when the water is boiling, steep your prunes in it with your wire basket for a minute, till every prune is made quite hot; then expose them to the sun for that day, and the next morning you can pack them in boxes or sacks, as you prefer. This last step will make your prunes very clear and glossy, and will kill every insect and destroy their eggs effectually.

If you follow the above directions you will turn out an article equal to the best in the market, and will obtain the best price.

Let us now figure the cost and profit.

COST.

Ten acres of bottom land, at \$100 per acre
 One thousand trees, at 15 cents each
 Plowing the land
 Digging the holes
 Planting the trees
 Cultivating
 Second, third, and fourth years, \$50 each for plowing and cultivating
 Taxes for four years
 Total

PROFIT.

The fifth year you will have one thousand trees bearing sixty pounds each, or thirty tons, equal to ten tons of dried prunes, worth 10 cents per pound or \$200 per ton
 If you deduct 10 per cent for labor you will have a balance of \$1,800 net, paying for the whole of the investment and \$300 profit left.
 The sixth year you will have sixty tons of green fruit, or twenty tons of dried prunes, worth
 On the seventh year your trees will be in full bearing condition, and will bear each from one hundred and fifty to two hundred, or even three hundred pounds to the tree, and I believe I am on the safe side when I say that each tree will bring you \$5 net each year, or

All of this from an investment of less than \$1,500. And what would be the property bringing \$5,000 a year? I suppose not less than \$25,000.
 I dried this year (1883) twenty tons of French prunes from six hundred trees, \$4,000 for them in sacks.

WHEAT, FLOUR, AND BARLEY.

By T. C. FRIEDLANDER, Secretary San Francisco Produce Exchange.

WHEAT.

The crop year of 1890 will always be associated with the wet winter 1889-90, when the rainfall was so excessive that plowing and seeding were interfered with to such an extent that the wheat acreage in the Sacramento Valley was reduced nearly one half, and in the San Joaquin Valley and the balance of the State 10 to 35 per cent, from the preceding year.

This acreage, estimated at two million five hundred thousand acres, added about eight hundred and seventy-two thousand short tons, making the average yield nearly seven centals per acre, and showing a decrease from the crop of 1889 of nearly four hundred thousand tons. While the rain fell continuously during the winter months, the precipitation was below the normal after the middle of March, and so the yield per acre is below that of 1889.

The fact that some of the heaviest producing land in the State was under water or so wet that it was impossible to plow, tended in small measure to reduce the average yield.

The year opened with full stocks of wheat on hand, No. 1 white selling at 26½ per cental alongside ship. Prices soon declined to \$1 25, but under the influence of unfavorable weather began to stiffen in March, and, with varying fluctuations, reached \$1 36½ in May. After that, on improving crop prospects and a quiet foreign market, values again declined to \$1 26½, and subsequently reacted, the market value on the 1st of July being \$1 31½.

All this time the foreign markets had been quiet and steady, cargoes of prompt shipment to Cork per order to U. K. or Cont. ranging from 39d to 34s 6d, with a temporary drop towards the latter part of March to 34s.

On the first of July, 35s 6d was obtainable, and under the influence of weather in England and bad crop prospects in the Western and Middle States, all markets of the world hardened, until cargoes in August touched 38s 6d, and spot wheat in California sold at \$1 41½ alongside ship. For the balance of the year the English market fluctuated between 38s 6d and 37s.

Our market, owing to a limited supply of tonnage, began to weaken in the advance in August, and, with various fluctuations, but always with a tendency to seek a lower level, prices declined to \$1 30 in September.

Taking the year as a whole, our wheat farmers obtained a better price for their grain than they did in the preceding year, but still the total value of the crop of 1890 does not equal that of 1889, owing to the deficiency in the yield as already set forth.

Grain freights to Europe after the movement of the new crop commenced stiffened considerably, and held their advance through six months of the year under review.

A general strike in Australia among all classes of labor cut the accustomed supply of tonnage from this quarter for nearly six months, and contributed in no small measure in upholding rates, and consequently reducing the value of the product of our farms.

FLOUR.

The flour trade for the year, while bringing our millers no profits, was free from excitement and must be considered as quiet and satisfactory.

Exports amounted in round numbers to one million one hundred eighty-two thousand barrels, showing a slight increase from 1888. Our millers consequently held their own in the usual consuming market.

The output of all the mills in California is estimated at two hundred and seventy-five thousand barrels for the year, against two hundred and seventy-five thousand barrels in 1889.

BARLEY.

The acreage seeded to barley in 1890 was much reduced, owing to the same causes that affected the acreage in wheat, and while it is difficult to form a correct estimate of the yield of this cereal, on account of it being consumed on the farms where grown, it is safe to say that the yield at not over 75 per cent of that of the preceding year, which was less than the yield in 1888, when the largest crop was grown in California was harvested.

While there was yet time to seed, prices remained steady at an average of 80 cents per cental in San Francisco, the range being from 75 to 85 cents.

In the beginning of April, when it was apparent that there was no sure to show a reduced yield, prices stiffened and rapidly advanced to 100 cents per ton.

In July there was a further advance, until \$1 50 per cental was reached in November, after which there was a slight reaction, the price during the last of the year being \$1 45 per cental.

The enhanced value of barley caused a very decided falling off in exports, the total shipments from California for the year being only three hundred and eighteen thousand centals, and by rail but three thousand, making the total shipments for the year a little less than three hundred and forty-one thousand centals, as against one million in 1889.

After April the overland shipments were nil, and of the exports a larger percentage than usual was Chevalier, although the shipments of Chevalier show quite a considerable loss.

A noteworthy feature of the year has been the free arrivals of grain from Oregon and Washington, the total for the last four months of the year amounting to one hundred and seven thousand centals, and from January up to this writing, the twenty-seventh, seventy-six thousand and six hundred centals.

RECEIPTS OF PRODUCE AT THE PORT OF SAN FRANCISCO FROM ALL SOURCES FROM JANUARY 1, 1890, TO DECEMBER 31, 1890.

MONTH.	Flour— Quarter Sacks.	Wheat— Centals.	Barley— Centals.	Oats— Centals.	Beans— Sacks.	Corn— Centals.	Rye— Centals.
January	492,567	1,528,655	124,205	25,561	21,535	10,391	54,101
February	465,247	1,773,613	88,827	33,051	27,920	9,211	3,918
March	517,938	1,185,009	89,442	46,709	49,294	29,071	2,965
April	479,573	1,067,054	186,792	48,700	24,347	34,371	37,474
May	538,606	1,155,556	175,811	62,294	25,144	16,072	6,533
June	276,984	577,207	113,043	33,641	19,581	37,249	3,704
July	437,889	893,399	214,724	15,573	9,594	10,065	9,858
August	524,510	1,151,315	218,683	23,962	20,183	29,116	6,655
September	437,506	1,044,806	173,497	103,664	40,008	22,375	6,000
October	570,029	1,142,591	196,052	57,035	103,976	45,378	4,983
November	436,162	1,198,161	162,704	40,135	51,119	74,046	6,137
December	540,689	1,491,860	107,566	42,007	27,894	50,345	4,639
Totals, 1890	5,917,700	14,209,226	1,851,346	532,332	420,595	367,690	146,967
Totals, 1889	5,597,109	13,246,621	2,255,560	586,484	368,135	213,712	51,273
Totals, 1888	4,354,420	12,917,228	2,792,631	609,529	269,067	221,098	28,543
Totals, 1887	3,600,345	9,602,631	2,065,366	414,812	423,530	281,600	32,277
Totals, 1886	4,885,772	16,527,503	2,184,560	508,717	361,320	218,100	26,275
Totals, 1885	5,340,092	13,053,685	1,244,811	717,013	367,233	157,309	62,335

MONTH.	Potatoes— Sacks.	Hay— Tons.	Hops— Bales.	Flax— Sacks.	Mustard— Sacks.	Wool— Bales.
January	215,348	7,095	232	622	94	277
February	69,088	8,739	277	1,000	1,695	197
March	74,709	10,400	644	728	806	4,920
April	80,923	11,388	528	2,106	488	20,920
May	47,238	10,815	440	3,469	266	16,888
June	90,498	11,980	146	1,352	196	14,986
July	91,082	16,124	250	—	—	6,105
August	124,968	15,314	112	608	2,115	6,364
September	126,359	14,941	3,041	3,342	8,929	9,754
October	144,600	8,948	3,449	13,667	6,029	16,026
November	137,148	8,872	338	20,085	6,795	4,080
December	150,457	7,426	197	9,176	1,999	973
Totals, 1890	1,355,418	132,042	10,154	56,155	29,412	101,490
Totals, 1889	1,351,897	124,264	14,149	72,203	27,941	109,746
Totals, 1888	1,239,430	127,701	17,952	95,905	26,108	105,838
Totals, 1887	961,200	117,360	—	58,193	37,734	110,769
Totals, 1886	1,079,593	99,442	—	88,704	43,828	114,098
Totals, 1885	1,192,461	79,590	—	81,444	11,856	118,237

REPORT OF FLOUR AND GRAIN REMAINING IN THE STATE OF CALIFORNIA DECEMBER 1, 1890.

	Flour— Barrels.	Wheat— Centals.	Barley— Centals.	Oats— Centals.	Beans— Sacks.	Corn— Centals.
San Francisco and Oakland Wharf, including grain afloat in harbor and in transit	30,075	774,936	241,858	46,280	45,895	58,000
Marin, Sonoma, Lake, Men- docino, and Humboldt Counties	5,481	34,960	8,354	2,761	84	1,200
Napa, Solano, Yolo, and Colusa Counties	7,523	2,472,520	41,955	120	110	0
Sacramento, Yuba, Sutter, Butte, and Tehama Coun- ties	29,200	1,140,290	62,755	3,700	2,500	5,700
Contra Costa and Alameda Counties	2,100	2,692,636	217,738	750	-----	1,500
San Joaquin, Stanislaus, Merced, Fresno, Tulare, and Kern Counties	13,748	4,140,570	338,086	1,240	275	5,000
San Mateo, Santa Clara, San Benito, Santa Cruz, and Monterey Counties	21,670	548,800	337,498	4,234	10,278	1,400
San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, San Ber- nardino, and San Diego Counties	8,326	364,281	367,411	2,000	115,149	228,800
Totals	118,123	12,168,993	1,615,655	61,085	174,291	302,000

COMPARATIVE STATEMENT.

	Flour— Barrels.	Wheat— Centals.	Barley— Centals.	Oats— Centals.	Beans— Sacks.	Corn— Centals.
June 1, 1890	81,090	4,801,063	1,004,457	61,235	39,503	91,111
December 1, 1889	116,225	15,300,368	3,321,860	120,356	107,419	134,915
June 1, 1889	100,565	2,092,430	2,052,630	119,245	60,415	88,625
December 1, 1888	95,906	10,819,630	4,087,050	120,175	235,320	266,747
July 1, 1888	71,920	3,881,960	2,068,450	62,095	33,675	82,200
January 1, 1888	59,979	9,730,060	4,522,990	65,380	109,925	121,300
July 1, 1887	50,275	2,790,400	798,500	42,400	74,405	72,300
January 1, 1887	89,605	7,812,850	2,590,250	47,400	243,550	136,630
July 1, 1886	102,325	1,252,600	114,850	31,150	103,700	27,650
October 10, 1885	107,180	13,768,539	1,620,500	-----	-----	-----
July 1, 1885	70,800	5,382,900	608,150	107,440	81,280	72,100
January 1, 1885	187,830	15,852,210	1,933,250	304,710	168,110	146,430
July 1, 1884	112,600	664,050	640,350	58,450	44,175	16,110
January 1, 1884	177,280	6,735,720	2,434,150	149,330	53,050	91,230
July 1, 1883	77,000	979,500	820,500	10,300	56,060	57,430
January 1, 1883	158,893	8,381,879	1,941,466	118,650	94,830	90,880
July 1, 1882	119,324	2,822,903	162,416	21,305	48,708	61,500
January 1, 1882	123,151	15,191,020	823,322	85,143	95,843	157,710
July 1, 1881	135,592	12,444,278	595,028	15,744	70,780	94,200
January 1, 1881	78,253	19,805,466	1,651,787	95,220	113,708	228,000
July 1, 1880	30,934	323,821	908,294	18,357	52,217	88,500
January 1, 1880	83,638	4,096,895	2,013,930	112,351	48,904	120,715
July 1, 1879	37,786	693,251	806,565	26,484	-----	143,000
January 1, 1879	75,130	5,781,168	2,207,142	137,042	-----	233,500
July 1, 1878	20,231	284,424	147,598	29,564	-----	11,600
January 1, 1878	57,187	2,646,811	882,046	104,998	-----	110,400

CLEARANCES FROM SAN FRANCISCO BY SEA IN 1890.

MONTH.	Flour— Barrels.	Wheat— Centals.	Barley— Centals.	Oats— Centals.	Beans— Sacks.	Corn— Centals.	Rye— Centals.
January	86,186	1,345,116	32,878	4,320	1,659	3,605	55,273
February	120,733	1,714,441	9,964	1,502	1,717	3,024	nil.
March	92,224	1,287,795	16,256	3,018	1,807	1,493	nil.
April	86,814	967,040	18,425	3,206	2,375	9,229	32,736
May	87,067	1,201,436	17,006	2,707	1,783	19,751	nil.
June	113,716	570,879	14,197	1,717	1,349	2,835	nil.
July	86,191	679,217	26,774	1,944	2,890	4,161	8,000
August	97,336	1,056,254	39,371	1,345	1,890	7,574	nil.
September	80,174	751,583	14,505	2,322	2,371	9,759	3
October	140,233	956,386	94,412	2,082	3,092	5,515	nil.
November	95,223	1,115,438	14,147	2,246	3,444	4,509	nil.
December	96,214	1,374,325	20,378	2,088	3,776	6,882	nil.
Totals, 1890	1,182,111	13,019,910	318,313	28,447	27,653	78,337	96,012
Totals, 1889	1,109,126	12,257,046	830,331	59,323	-----	26,486	-----
Totals, 1888	808,439	11,708,261	1,029,361	35,985	-----	51,041	-----
Totals, 1887	788,180	9,140,689	416,583	-----	-----	-----	-----
Totals, 1886	1,104,395	15,874,268	760,606	-----	-----	-----	-----

STOCKS OF GRAIN IN REGULAR WAREHOUSES—IN TONS.

	Wheat.	Barley.	Oats.	Corn.
January 1, 1890	131,488	25,151	2,704	1,730
February 1, 1890	106,442	23,314	2,118	823
March 1, 1890	78,467	20,944	1,213	541
April 1, 1890	70,426	16,042	1,242	612
May 1, 1890	64,113	14,732	1,444	649
June 1, 1890	58,691	13,869	2,509	524
July 1, 1890	47,862	9,619	2,321	1,161
August 1, 1890	73,893	9,713	1,508	515
September 1, 1890	125,056	10,683	599	602
October 1, 1890	160,117	11,165	3,328	556
November 1, 1890	165,638	9,542	2,579	1,041
December 1, 1890	147,397	10,880	2,024	2,588
January 1, 1891	125,474	9,332	1,510	3,210

ARRIVALS OF NEW WHEAT.

The date of arrival of new wheat at tide water each year the cereal was first produced in quantity, and the price obtained same, is given below:

YEAR.	Month.
1890	May 20
1889	May 24
1888	June 15
1887	June 11
1886	June 5
1885	June 3
1884	June 30
1883	June 19
1882	June 6
1881	June 7
1880	June 24
1879	June 20
1878	June 13
1877	June 2
1876	June 9
1875	June 2
1874	June 11
1873	June 7
1872	June 10
1871	June 23
1870	June 9
1869	June 15
1868	June 18
1867	June 17
1866	June 25
1865	June 12
1864	July 9
1863	July 25
1862	July 11
1861	July 24
1860	July 3
1859	July 14

RAINFALL AND WHEAT.

The following table shows the rainfall at San Francisco for years, and the crop of wheat raised:

SEASON.	Inches.	Crop.
1877-78	31.12	1878
1878-79	24.56	1879
1879-80	26.38	1880
1880-81	29.86	1881
1881-82	16.14	1882
1882-83	20.12	1883
1883-84	32.28	1884
1884-85	18.10	1885
1885-86	33.05	1886
1886-87	19.04	1887
1887-88	16.74	1888
1888-89	22.06	1889
1889-90	45.84	1890

* Estimated.

STATISTICS CROP YEAR 1889-90.

	Wheat—Tons.
Wheat flour, twelve months ending May 31, 1890, 1,143,563 barrels	165,817
Wheat, twelve months ending May 31, 1890	692,247
Total exports	858,064
Total consumption, twelve months	205,000
Wheat destroyed by fire	90,000
Wheat in State June 1, 1890	12,000
Total	251,811
	1,416,875
Deduct—	Wheat—Tons.
Wheat from Oregon and Washington	11,330
Wheat from Oregon and Washington	27,097
Total imports	38,427
Wheat carried over July 1, 1889	119,701
	158,128
Crop of 1889	1,258,747
B.—A barrel of flour taken at an equivalent of two hundred and ninety pounds of wheat.	

AVERAGE PRICE OF NO. 1 FEED BARLEY.

Barley	\$0 75 $\frac{1}{2}$
Barley	79 $\frac{1}{2}$
Barley	1 00 $\frac{1}{2}$
Barley	1 28
Barley	97 $\frac{1}{2}$
Barley	94 $\frac{1}{2}$
Barley	1 25 $\frac{1}{2}$

ARRIVALS OF NEW BARLEY.

The first receipts of barley for a series of years past, and the price it brought, is annexed:

YEAR.	Month.	Price.
	May 31	\$1 06 $\frac{1}{2}$
	June 1	75
	June 5	92 $\frac{1}{2}$
	June 4	1 15
	May 27	1 10
	June 18	1 25
	July 9	90
	June 25	95
	June 12	1 65
	June 21	90
	June 24	68 $\frac{1}{2}$
	June 30	75
	June 11	80
	June 30	1 55
	May 30	90
	June 20	1 35
	June 9	1 45
	June 5	1 10
	June 6	1 40
	June 12	1 57 $\frac{1}{2}$
	June 19	1 20

AVERAGE PRICE OF WHEAT.

The average price of No. 1 wheat, spot, each year since 1870 has been as follows:

Year.
1889-90.....
1888-89.....
1887-88.....
1886-87.....
1885-86.....
1884-85.....
1883-84.....
1882-83.....
1881-82.....
1880-81.....
1879-80.....
1878-79.....
1877-78.....
1876-77.....
1875-76.....
1874-75.....
1873-74.....
1872-73.....
1871-72.....
1870-71.....

WHEAT AND BARLEY OPTIONS—1890.

The following official figures from the records of the San Francisco Produce Exchange Call Board Association show the highest and lowest prices of wheat and barley options during each month of 1890:

Wheat.

MONTH.	Buyer '90.		Buyer Season Ending May 31, 1890.		Buyer Ending May 31, 1890.
	High.	Low.	High.	Low.	
January.....	\$1 41 $\frac{3}{4}$	\$1 37 $\frac{1}{8}$	\$1 37 $\frac{1}{4}$	\$1 32 $\frac{1}{2}$	.....
February.....	1 37 $\frac{1}{2}$	1 34 $\frac{1}{4}$	1 32 $\frac{3}{4}$	1 28 $\frac{1}{2}$	.....
March.....	1 38 $\frac{1}{2}$	1 35 $\frac{1}{2}$	1 31 $\frac{1}{2}$	1 28 $\frac{1}{2}$	.....
April.....	1 40 $\frac{1}{2}$	1 36 $\frac{1}{2}$	1 31 $\frac{1}{2}$	1 28 $\frac{1}{2}$	.....
May.....	1 47 $\frac{1}{2}$	1 38 $\frac{1}{2}$	1 36 $\frac{1}{2}$	1 26 $\frac{1}{2}$	.....
June.....	1 42 $\frac{1}{2}$	1 37 $\frac{1}{2}$	.....	.....	\$1 48 $\frac{1}{2}$
July.....	1 47 $\frac{1}{2}$	1 40 $\frac{1}{2}$	.....	.....	1 58 $\frac{1}{2}$
August.....	1 46 $\frac{1}{2}$	1 41 $\frac{1}{2}$	.....	.....	1 58 $\frac{1}{2}$
September.....	1 44 $\frac{1}{2}$	1 35 $\frac{1}{2}$	.....	.....	1 58 $\frac{1}{2}$
October.....	1 38 $\frac{1}{2}$	1 35 $\frac{1}{2}$	.....	.....	1 48 $\frac{1}{2}$
November.....	1 36 $\frac{1}{2}$	1 30 $\frac{1}{2}$	.....	.....	1 44 $\frac{1}{2}$
December.....	1 32 $\frac{1}{2}$	1 29 $\frac{1}{2}$	.....	.....	1 44 $\frac{1}{2}$

Barley.

MONTH.	Buyer '90.		Buyer Season Ending May 31, 1890.		Buyer Season Ending May 31, 1891.	
	High.	Low.	High.	Low.	High.	Low.
January.....	\$0 95	\$0 88 $\frac{1}{2}$	\$0 93 $\frac{1}{2}$	\$0 84 $\frac{1}{2}$	.....	.....
February.....	89 $\frac{1}{2}$	81 $\frac{1}{2}$	84 $\frac{1}{2}$	75 $\frac{1}{2}$	.....	.....
March.....	89 $\frac{1}{2}$	83 $\frac{1}{2}$	85 $\frac{1}{2}$	76 $\frac{1}{2}$	.....	.....
April.....	1 07 $\frac{1}{2}$	89 $\frac{1}{2}$	93 $\frac{1}{2}$	85 $\frac{1}{2}$	.....	.....
May.....	1 13 $\frac{1}{2}$	1 05 $\frac{1}{2}$	1 04 $\frac{1}{2}$	93 $\frac{1}{2}$	.....	.....
June.....	1 11 $\frac{1}{2}$	1 07 $\frac{1}{2}$	.....	.....	\$1 17 $\frac{1}{2}$	\$1 13 $\frac{1}{2}$
July.....	1 30 $\frac{1}{2}$	1 09 $\frac{1}{2}$	.....	.....	1 35 $\frac{1}{2}$	1 14 $\frac{1}{2}$
August.....	1 37 $\frac{1}{2}$	1 26 $\frac{1}{2}$	.....	.....	1 43 $\frac{1}{2}$	1 30 $\frac{1}{2}$
September.....	1 42 $\frac{1}{2}$	1 32 $\frac{1}{2}$	.....	.....	1 47 $\frac{1}{2}$	1 36 $\frac{1}{2}$
October.....	1 50 $\frac{1}{2}$	1 38 $\frac{1}{2}$	.....	.....	1 55 $\frac{1}{2}$	1 46 $\frac{1}{2}$
November.....	1 52 $\frac{1}{2}$	1 46 $\frac{1}{2}$	.....	.....	1 57 $\frac{1}{2}$	1 49 $\frac{1}{2}$
December.....	1 48 $\frac{1}{2}$	1 43 $\frac{1}{2}$	.....	.....	1 54 $\frac{1}{2}$	1 45 $\frac{1}{2}$

WHEAT QUOTATIONS FROM JANUARY 1, 1890, TO DECEMBER 31, 1890.

MONTH.	Highest Price.	Lowest Price.	Average for Month.
January.....	\$1 28 $\frac{1}{2}$	\$1 25	\$1 27 $\frac{1}{2}$
February.....	1 27 $\frac{1}{2}$	1 25	1 26 $\frac{1}{2}$
March.....	1 31 $\frac{1}{2}$	1 25	1 27 $\frac{1}{2}$
April.....	1 32 $\frac{1}{2}$	1 26 $\frac{1}{2}$	1 29 $\frac{1}{2}$
May.....	1 36 $\frac{1}{2}$	1 26 $\frac{1}{2}$	1 32 $\frac{1}{2}$
June.....	1 30 $\frac{1}{2}$	1 26 $\frac{1}{2}$	1 28 $\frac{1}{2}$
July.....	1 40 $\frac{1}{2}$	1 27 $\frac{1}{2}$	1 36 $\frac{1}{2}$
August.....	1 41 $\frac{1}{2}$	1 31 $\frac{1}{2}$	1 40 $\frac{1}{2}$
September.....	1 40 $\frac{1}{2}$	1 30 $\frac{1}{2}$	1 35 $\frac{1}{2}$
October.....	1 36 $\frac{1}{2}$	1 30 $\frac{1}{2}$	1 33 $\frac{1}{2}$
November.....	1 36 $\frac{1}{2}$	1 30 $\frac{1}{2}$	1 33 $\frac{1}{2}$
December.....	1 33 $\frac{1}{2}$	1 28 $\frac{1}{2}$	1 31 $\frac{1}{2}$

BARLEY QUOTATIONS FROM JANUARY 1, 1890, TO DECEMBER 31, 1890.

MONTH.	Highest Price.	Lowest Price.	Average for Month.
January.....	\$0 86 $\frac{1}{2}$	\$0 77 $\frac{1}{2}$	\$0 81 $\frac{1}{2}$
February.....	81 $\frac{1}{2}$	75	78 $\frac{1}{2}$
March.....	83 $\frac{1}{2}$	75	79 $\frac{1}{2}$
April.....	1 00 $\frac{1}{2}$	82 $\frac{1}{2}$	91 $\frac{1}{2}$
May.....	1 06 $\frac{1}{2}$	95	1 01 $\frac{1}{2}$
June.....	1 00 $\frac{1}{2}$	1 05	1 01 $\frac{1}{2}$
July.....	1 27 $\frac{1}{2}$	1 00 $\frac{1}{2}$	1 13 $\frac{1}{2}$
August.....	1 44 $\frac{1}{2}$	1 20 $\frac{1}{2}$	1 26 $\frac{1}{2}$
September.....	1 36 $\frac{1}{2}$	1 27 $\frac{1}{2}$	1 32 $\frac{1}{2}$
October.....	1 47 $\frac{1}{2}$	1 31 $\frac{1}{2}$	1 39 $\frac{1}{2}$
November.....	1 52 $\frac{1}{2}$	1 45	1 49 $\frac{1}{2}$
December.....	1 50 $\frac{1}{2}$	1 45	1 48 $\frac{1}{2}$

WHEAT FREIGHTS.

The following table shows the average, highest, and lowest rates for wheat ships each month of 1890, the rate being based on the rate paid for ships to Cork for orders to U. K., Havre, or Antwerp.

MONTH.	Average.			Highest.		
January—	£	s.	d.	£	s.	d.
Wood	1	12	3	1	13	0
Iron	1	17	6	2	0	0
February—						
Wood	1	13	9	1	14	6
Iron	1	17	3	1	19	3
March—						
Wood	1	13	10	1	15	3
Iron	1	16	10	1	18	0
April—						
Wood	1	12	10	1	15	0
Iron	1	16	3	1	18	0
May—						
Wood	1	16	8	1	17	6
Iron	1	19	11	2	1	3
June—						
Wood	1	16	0	1	17	6
Iron	2	0	4	2	1	0
July—						
Wood	1	18	6	2	0	0
Iron	2	1	0	2	3	9
August—						
Wood	2	1	3	2	3	9
Iron	2	5	0	2	6	3
September—						
Wood	1	17	6	1	17	6
Iron	2	3	5	2	5	0
October—						
Wood	1	18	6	2	0	0
Iron	2	2	1	2	3	0
November—						
Wood	2	2	4	2	5	0
Iron	2	2	4	2	5	0
December—						
Wood	1	18	1	1	18	9
Iron	1	2	6	2	3	9

Average Rates for Season.

YEAR.	Wood.		
1889-90	£	s.	d.
1888-89	1	13	5
1887-88	1	8	3
1886-87	1	5	6
1885-86	1	6	1
1884-85	1	9	3
1883-84	1	14	2
1882-83	1	5	8
1881-82	2	3	6
1880-81	3	5	9

Old Records.

Prior to 1880, rates for iron and wooden ships were not separated, but the following rates are quoted for a series of years, the highest rate being £5 13s for the wooden ship "Agenor" to Liverpool direct:

YEAR.	Average.			Highest.			Lowest.		
	£	s.	d.	£	s.	d.	£	s.	d.
1880	2	15	0	3	10	0	1	19	0
1879	2	10	0	3	0	0	1	10	0
1878	2	0	0	2	10	0	1	12	6
1877	3	0	0	3	12	0	1	17	6
1876	2	10	0	3	2	6	2	0	0
1875	3	10	0	4	11	6	2	0	0
1874	4	2	6	5	5	0	3	10	0
1873	4	5	0	5	13	0	3	0	0

Number of Wheat Vessels Dispatched.

MONTH.	No.	MONTH.	No.
July	23	1890—January	27
August	20	February	29
September	22	March	27
October	31	April	20
November	24	May	22
December	29	June	10

1889-90	284
1888-89	289
1887-88	198
1886-87	282
1885-86	249
1884-85	371
1883-84	291
1882-83	371
1881-82	559
1880-81	358

BARLEY SHIPMENTS—1890.

MONTHS.	SAN FRANCISCO.		INTERIOR POINTS.	
	BY SEA.		BY RAIL.	BY RAIL.
	Foreign— Centals.	Domestic— Centals.	Domestic— Centals.	Domestic— Centals.
January	32,878			10,961
February	9,964			1,685
March	16,256			308
April	18,425			
May	17,006			
June	14,197			
July	14,774	12,000		
August	26,976	12,395		
September	6,971	7,534		
October	46,596	47,816		
November	7,244	6,903		
December	16,490	3,888		
Total	227,777	90,536	Nil.	22,954

SHIPMENTS OF BEANS—IN CENTALS.

	FROM SAN FRANCISCO.	
	Foreign, by Sea.	To Atlantic, by Sea.
1890—January	1,438	221
February	1,414	303
March	1,017	790
April	1,397	978
May	1,533	250
June	1,349	.....
July	1,814	576
August	1,652	238
September	1,234	1,137
October	1,663	1,429
November	3,090	354
December	1,891	1,885
Totals	19,492	8,161

UNIT OF MEASURE.		January, 1890.	February, 1890.	March, 1890.	April, 1890.	May, 1890.	June, 1890.
WHEAT—Milling.	Cental.	\$1 81½	\$1 31½	\$1 30	\$1 30	\$1 33½	\$1 32½
Cental.	No. 1 White.	1 24½	1 27½	1 24½	1 24½	1 31½	1 27½
Cental.	No. 1 Amber.	1 24½	1 26½	1 25	1 25	1 30	1 26½
BARLEY—	Cental.	1 55	1 35				
Cental.	No. 1 Chevalier.	87½	92½				
Cental.	No. 1 Brewing.	92½	87½				
Cental.	No. 2 Brewing.	82½	80				
Cental.	No. 1 Feed.	82½	80				
OATS—Milling.	Cental.	\$1 32½ @ 1 35	\$1 32½ @ 1 30	\$1 37½ @ 1 40	\$1 37½ @ 1 40	97½	\$1 10 @ 1 12½
Cental.	No. 1.	1 25 @ 1 27½	1 30	75	85	1 06	1 07½ @ 1 10
Cental.	No. 2.	1 17½ @ 1 20	1 25	1 25 @ 1 27½	1 25 @ 1 27½	1 75	1 00 @ 1 02½
CORN—	Cental.	1 17½ @ 1 20	1 25	1 25 @ 1 27½	1 25 @ 1 27½	1 60	1 55 @ 1 60
Cental.	No. 1 Large Yellow.	97½	1 06	1 00 @ 1 05	1 12½ @ 1 15	1 15	1 07½ @ 1 10
Cental.	No. 1 White.	1 05	1 05	1 00 @ 1 05	1 12½ @ 1 15	1 15	1 07½ @ 1 10
Cental.	No. 1 Small Round.	1 00	97½ @ 1 00	1 00 @ 1 05	1 12½ @ 1 15	1 15	1 07½ @ 1 10
RYE—	Cental.	1 00	97½ @ 1 00	1 00 @ 1 05	1 12½ @ 1 15	1 15	1 07½ @ 1 10
Cental.	No. 1.	1 00	97½ @ 1 00	1 00 @ 1 05	1 12½ @ 1 15	1 15	1 07½ @ 1 10
FLOUR—	Barrel.	4 25 @ 4 35	4 15 @ 4 25	4 15 @ 4 25	4 15 @ 4 25	4 15	4 15 @ 4 25
Barrel.	Family Extras.	4 15 @ 4 20	4 00 @ 4 05	4 00 @ 4 05	4 00 @ 4 05	4 00	4 00 @ 4 05
Barrel.	Bakers Extras.	4 15 @ 4 20	4 00 @ 4 05	4 00 @ 4 05	4 00 @ 4 05	4 00	4 00 @ 4 05
Superfine.	Barrel.	2 75 @ 3 10	2 60 @ 2 75	2 60 @ 2 75	2 60 @ 2 75	2 60	2 60 @ 2 75
POTATOES—	Cental.	1 55 @ 1 60	1 50	1 60	1 60	1 75	1 55
Good Merchantable.	Ton.	12 00 @ 14 00	10 00 @ 13 00	10 00 @ 13 00	14 00 @ 15 00	14 00	14 00 @ 15 00
HAY—	No. 1 Wheat.	8 00 @ 9 50	7 50 @ 9 00	7 00 @ 9 00	9 00 @ 10 00	11 00	7 00 @ 9 00
No. 1 Barley.	Ton.	9 00 @ 11 00	9 00 @ 10 50	9 00 @ 10 50	11 50 @ 12 50	12 00	10 00 @ 11 00
No. 1 Oat.	Ton.	22 @ 24	22 @ 24	17 @ 20	15 @ 17	13 @ 16	15 @ 16
BUTTER—	Pound.	22 @ 24	22 @ 24	17 @ 20	15 @ 17	13 @ 16	15 @ 16
Fancy.	Pound.	17 @ 20	17 @ 20	12½ @ 15	12½ @ 15	13 @ 16	13½ @ 14
Good to Choice.	Pound.	17 @ 20	17 @ 20	12½ @ 15	12½ @ 15	13 @ 16	13½ @ 14
Common to Fair.	Pound.	12 @ 15	12 @ 15	10 @ 12	10 @ 12	10 @ 12	9 @ 10
CHEESE—	Pound.	8 @ 12½	8 @ 12½	8 @ 11	7½ @ 10½	7 @ 9½	6 @ 8
New.	Pound.	20 @ 22	20 @ 22				
Wool—	Pound.	20 @ 22	20 @ 22				
Northern Spring.	Pound.	20 @ 22	20 @ 22				
Middle Co.	Pound.	20 @ 22	20 @ 22				
San Joaquin.	Pound.	20 @ 22	20 @ 22				
Southern and Coast.	Pound.	20 @ 22	20 @ 22				
Nevada Spring.	Pound.	20 @ 22	20 @ 22				
Oregon Eastern.	Pound.	20 @ 22	20 @ 22				
Oregon Valley.	Pound.	20 @ 22	20 @ 22				
Oregon Fall and Lamb.	Pound.	20 @ 22	20 @ 22				
Northern Fall.	Pound.	20 @ 22	20 @ 22				
Middle Co. Fall.	Pound.	20 @ 22	20 @ 22				
San Joaquin Fall.	Pound.	20 @ 22	20 @ 22				
Southern Coast Fall.	Pound.	20 @ 22	20 @ 22				
Nevada Fall.	Pound.	20 @ 22	20 @ 22				
Hops—California.	Pound.	13 @ 15	11½	12½	13½	14	16

CASH PRICES IN SAN FRANCISCO ON THE FIRST OF EACH MONTH, FROM JULY 1, 1890, TO JANUARY 1, 1891.

ARTICLE.	Unit of Measure.	July, 1890.	August, 1890.	Sept., 1890.	October, 1890.	Nov., 1890.	Dec., 1890.	January, 1891.
WHEAT—Milling.....	Cental.	\$1 35	\$1 40	\$1 40	\$1 37½	\$1 40	\$1 38½	\$1 37½
No. 1 White.....	Cental.	1 31½	1 35	1 37½	1 32½	1 35	1 32½	1 35
No. 1 Amber.....	Cental.	1 30	1 35	1 36½	1 31½	1 33½	1 31½	1 33½
BARLEY—No. 1 Chevalier.....	Cental.							None.
No. 1 Brewing.....	Cental.	\$1 10 @	\$1 12½	1 12½	1 12½	1 12½	1 12½	1 55 @
No. 2 Brewing.....	Cental.	1 07½ @	1 10 @	1 10 @	1 37½ @	1 50 @	1 57½ @	1 52½ @
No. 1 Feed.....	Cental.	1 00 @	1 02½	1 25 @	1 35 @	1 45 @	1 53½ @	1 47½ @
OATS—Milling.....	Cental.	1 52½ @	1 55 @	1 67½ @	1 57½ @	1 75 @	1 87½ @	1 92½ @
No. 1.....	Cental.	1 45 @	1 50 @	1 60 @	1 45 @	1 70 @	1 80 @	1 87½ @
No. 2.....	Cental.	1 15 @	1 27½ @	1 27½ @	1 27½ @	1 25 @	1 70 @	1 82½ @
CORN—No. 1 Large Yellow.....	Cental.	1 00 @	1 120	1 32½ @	1 30 @	1 32½ @	1 30 @	1 32½ @
No. 1 White.....	Cental.	1 20 @	1 22½ @	1 32½ @	1 25 @	1 26 @	1 30 @	1 32½ @
No. 1 Small Round.....	Cental.	1 20 @	1 25 @	1 32½ @	1 25 @	1 26 @	1 30 @	1 32½ @
RYE—No. 1.....	Cental.	4 15 @	4 25 @	4 45 @	4 45 @	4 45 @	4 20 @	4 30 @
FLOUR—Family Extra.....	Barrel.	4 00 @	4 05 @	4 30 @	4 30 @	4 30 @	4 20 @	4 20 @
Bakers'.....	Barrel.	2 60 @	2 75 @	2 90 @	2 90 @	2 90 @	2 80 @	2 80 @
POTATOES—Good Merchantable.....	Cental.	1 25 @	1 25 @	1 25 @	1 25 @	1 25 @	1 25 @	1 25 @
HAY—No. 1 Wheat.....	Ton.	12 00 @	13 00 @	13 00 @	14 00 @	16 00 @	15 00 @	17 00 @
No. 1 Barley.....	Ton.	8 00 @	10 00 @	10 00 @	10 00 @	12 00 @	11 00 @	13 00 @
No. 1 Oat.....	Ton.	9 00 @	10 00 @	10 00 @	11 00 @	12 00 @	11 00 @	13 00 @
BUTTER—Fancy.....	Pound.	16 @	17 @	22½ @	24 @	26 @	26 @	26 @
Good to Choice.....	Pound.	13½ @	14½ @	21 @	22½ @	23 @	23 @	23 @
Common to Fair.....	Pound.	9 @	11 @	10 @	10 @	14 @	14 @	14 @
CHEESE—New.....	Pound.	6 @	8 @	8 @	8 @	9 @	9 @	9 @
Eggs—Choice.....	Dozen.	20 @	22½ @	25 @	26 @	28 @	28 @	28 @
Wool—Northern Spring.....	Store.	18 @	19 @	22½ @	24 @	26 @	26 @	26 @
Middle Co. Spring.....	Pound.	18 @	19 @	22½ @	24 @	26 @	26 @	26 @
San Joaquin Spring.....	Pound.	16 @	17 @	18 @	18 @	18 @	18 @	18 @
Southern and Coast Spring.....	Pound.	14 @	15 @	16 @	16 @	16 @	16 @	16 @
Oregon Eastern.....	Pound.	13 @	14 @	15 @	15 @	15 @	15 @	15 @
Oregon Valley.....	Pound.	14 @	15 @	16 @	16 @	16 @	16 @	16 @
Oregon Fall and Lamb.....	Pound.	18 @	19 @	20 @	20 @	20 @	20 @	20 @

A CALIFORNIA FRUIT CROP.

A \$43,000 YIELD FROM FIFTY-EIGHT ACRES.

The possibilities of a country are, as a rule, an unknown quantity to the general public, and few except the practical man, whose experience and success bring values to the notice of the world, are cognizant of the successful achievements made in the productions of the soil.

To those not familiar with the capabilities of California, we wish to set a few figures for their edification, relating to the output of a fifty-eight acre orchard and vineyard, the property of a thorough orchardist, known personally to the officers of this Society. Mr. R. D. Stephens, of Russell Post Office, California, gathered over \$43,000 worth of fruit from fifty-eight acres during the season of 1890. Of this tract, eighteen acres are devoted to the culture of grapes of the following varieties: Tokays, Cornichon, Purple Damascus, Emperor, and Black Zuccato. Forty acres are in Bartlett pears, prunes, and plums. The yield of grapes from the eighteen acres was most phenomenal, yielding, on an average, over \$1,000 per acre. It must be admitted that this productive yield was brought about by constant care and attention, and among the several factors necessary to obtain it are: First, character of soil; second, moisture—if Nature's supply proves insufficient, then obtain by irrigation; third, cultivation; fourth, pruning; and fifth, training.

Our orchards and vineyards in general throughout this portion of California are not irrigated. There are but few exceptions where land is watered by artificial means.

For the purpose of showing what can be done with the assistance of irrigation, we will state that Mr. Stephens established a system, at a cost of about \$10,000, which enables him to give his land a thorough drenching once or twice during the spring, after our usual rainfall. Then additional cultivation is also beneficial, and the result shows that the system followed and methods employed in the working of this tract have proportionate returns. What adds interest to the great success achieved by Mr. Stephens, is the fact that his land is of that character which was held by all not to, under any circumstances, need irrigation; the contrary, that irrigation would ruin his fruit for shipping by destroying its keeping qualities, etc. In constructing his irrigation system, he antagonized at that time the judgment of all the shippers of California fruit to eastern markets, and nearly all of the prominent growers of the State. However, he heeded none of the many predictions that financial ruin would certainly follow his success in carrying out his plans for irrigating; but, on the contrary, he pursued the even course of his way that a man does who has implicit confidence in the correctness of his own judgment. His reasons for believing that irrigation would produce beneficial results if the water be applied at the proper times and in proper quantities, were, to put them in his own language, as follows: "To grow a thing, of either vegetable or animal character,

the nearer the requirements of nature to produce the thing applied with, the more perfect it will be at maturity, the greater its powers of endurance, and, in the case of fruit, the greater its keeping or lasting qualities; therefore, it will be better conditioned for long shipments."

It might here be necessary to say that Mr. Stephens' market disposition of his great product is almost entirely in the city of New York, where he has established a reputation for the character of his fruit that enables him to obtain much better prices than many co-workers in this industry.

Mr. Stephens' first shipment of grapes was made on the twenty-first day of August and the last on the eighteenth day of November. During this period he shipped 2,121 double crates of 40 pounds each, 2,581 single crates of 20 pounds each, or a total of about 70 tons of Flame Tokay variety; 1,460 single crates, or about 15 tons of Concord; 109 single crates, or 2,180 pounds of Damascus; 159 crates, or 3,180 pounds of Emperor; 80 crates, or 1,600 pounds of Morocco; making a grand total of 6,510 crates, or 170,360 pounds, an average of 170 tons to each acre of grape land, quite a proportion of which is comparatively speaking, young in bearing, and consequently not up to the average. The older vines bear at the rate of over twelve tons to the acre.

A remarkable fact is that the older the vines the greater the yield. One acre of this tract, containing seven hundred vines, twenty years old, has yielded as high as sixty pounds to the vine. The rate of twenty-one tons to the acre. So that it is plainly evident that great care and attention has been given to not only the growth but the yield of these vines from planting. We should be pleased to see from any other grower that can show such yield.

For his Tokays, Mr. Stephens received from \$3 60 up to \$8 75 per double crates, or an average of \$6 17 for each crate, or 12 50 per pound. For the single crates he received from \$2 30 to \$3 50, or an average of \$2 95, which is about the same amount per pound as the double crates sold for. For his Cornichons he received an average of \$2 25 per single crate; the other varieties in about the same proportion.

Mr. Stephens' books show that he received for grapes the sum of \$20,421, or over \$240 per ton. From the remaining forty acres, out of pears, prunes, and plums, principally, Mr. Stephens sold grapes to the amount of \$19,305 50, and dried fruit to the amount of \$4,000, making a total for fruit of \$23,305 50; adding this to the grapes gives us the grand total of \$43,721 50. It must be remembered that with the exception of the \$4,000 worth of dried fruit, Mr. Stephens' output was sold as table fruit.

Mr. Stephens shipped almost exclusively by refrigerator cars, securing transportation at the lowest cost, and yet this item of expense amounts to over \$11,000, or over 28 per cent of gross receipts for shipments. The refrigerator cars are run in freight trains, and some of these shipments were en route from twenty-one to twenty-five days, which necessarily delivered the fruit at destination in an inferior condition. This accounts for the minimum prices received for the fruit herein. Some shipments were made by Mr. Stephens on express, that were out fourteen days, fully seven days over time. Improvements of this character are disastrous to the grower, and should be

the shipment of this class of freight, as time is of some moment in the handling of perishable goods.

In applying to Mr. Stephens for facts and figures regarding the gross output, we were referred directly to his books and given full liberty to examine the same and make our own deductions therefrom, and they were found to be as here represented.

It must be remembered that while Mr. Stephens' crop was an enormous output, that it is not all profit. His expenses in handling the crop amounted in the aggregate to \$19,000, distributed as follows:

Labor, which includes cultivation, pruning, picking, handling, and packing, amounted to \$5,500; transportation, \$11,000; sundries, including commissions, etc., \$2,500, or a total of \$19,000, which leaves a net amount of \$24,721 50, or over \$400 per acre net.

This is a showing that will be hard to equal. There are, we know, many orchards that pay from \$150 to \$250 net, and were freights less the price to consumer would be lower, thereby creating an increased demand, which would necessitate a greater increase of acreage to be devoted to this industry. Mr. Stephens' achievements are, we must say, uncommon, but intelligence, thrift, personal attention, and industry can accomplish like results from any of our good orchard lands.

He has demonstrated that intelligent pruning, thorough cultivation, a drenching or two of water, during the months of May and June, are important adjuncts to the success he has achieved. In the packing of his fruit for shipment, he has been most particular; none but the best being crated. Great care has been taken in keeping up the quality. In this way he has established a reputation for his brand that year by year brings an increase to his returns, and by maintaining this standard of excellence he creates a demand from highest priced purchasers, thereby making it profitable to him. It is an example all producers would do well to follow, that is, give the consumer, who is the individual all growers must cater to, the value he pays for, as in quality as he can you maintain paying prices. An inferior article brings an inferior price, and purchasers will be shy in subsequent dealings; but if a line of fruits or other products are put up under the growers' name, and he has established his market for quality, he will surely win, not only ready sales, but the top prices.

REPORT OF THE CALIFORNIA FRUIT UNION

FOR 1890.

MR. PRESIDENT, AND MEMBERS OF THE CALIFORNIA FRUIT UNION.—To-day we assemble for the sixth time to review the work of the year just closed, to select those who shall have charge of the organization during the year to come, and, possibly, by an expression of our various opinions, to correct any method that may have crept into the manner of conducting the affairs of the Union which appear to the majority a wrong course to pursue.

The retiring Board of Trustees and executive officers present a following report of the season's work with a degree of pride, as they think that in their hands the work of the Union has not been allowed to fall but, on the contrary, the progress made has been very extraordinary. With the books showing a business conducted amounting to nearly a million and three quarters for the seven active shipping months of the year—a business requiring the handling of nearly one thousand and five hundred carloads of fruit, together with six hundred or so carloads forwarded by our various members, who are working in complete harmony with us, yet sending carloads of fruit to quite a number of cities where we have no agencies established, we have a grand total of but short of two thousand out of about three thousand three hundred shipped by the entire State—they can, with no fear of contradiction, claim to whatever there may be of distinction in having forwarded through your coöperation, nearly two thirds of the entire great total of fruit shipments of the State.

How profitably this immense business has been conducted, you will have furnished the fruit can best answer for yourselves.

As the season was just opening, at a meeting of the Board of Trustees held May seventeenth, the resignations of President Platt and Secretary Gregory were received and accepted by the Board.

The number of our shippers has steadily increased, so that we had one hundred and seventy-three consignors in 1889, we had one hundred and twenty-two in 1890; while the number of cars forwarded has grown from nine hundred and ninety-one two years ago to one thousand three hundred and seventy-three during the season just closing—a gain of three hundred and eighty-two carloads. The fruit has been furnished at the thirty-one different shipping points scattered throughout the State, as shown by the following statement of

THE SEASON'S SHIPMENTS.

	1890.	1889.	1888.
San Francisco	254	171	163
San Jose	6		
San Mateo	138	38	33
San Francisco	2		
San Jose	290	206	97
San Mateo	109	28	25
San Francisco	196	278	346
San Jose	2		
San Mateo	3		6
San Francisco	3		
San Jose	1		
San Mateo	1	18	
San Francisco	68	47	11
San Jose	2		15
San Mateo	26	22	24
San Francisco	10	9	
San Jose	9		
San Mateo	25		
San Francisco	28	58	33
San Jose	59	32	
San Mateo	4	4	12
San Francisco	3		
San Jose	56	52	29
San Mateo	1	5	
San Francisco	24		
San Jose	25		
San Mateo	11		10
San Francisco	1		
San Jose	5		11
San Mateo	10		
San Francisco	1		
San Jose		1	
San Mateo		5	
San Francisco		4	7
San Jose		11	17
San Mateo		2	3
San Francisco			6
San Jose			2
San Mateo			
Total number of carloads for season	1,373	991	851

DISTRIBUTION OF CARLOADS FOR SEASON OF 1890.

San Francisco	828
San Jose	136
San Mateo	116
San Francisco	74
San Jose	73
San Mateo	58
San Francisco	39
San Jose	32
San Mateo	10
San Francisco	7
Making a total of	1,373

Our shipments for the year have been divided as follows: One hundred and ninety cars forwarded in special trains; four hundred and seventy by passenger trains; two hundred and fifty-eight by freight, and four hundred and forty-nine by refrigerator cars, which mainly received freight service.

Upon entering upon the record books of the Union some eleven thousand duplicate accounts of sales, it is found that five hundred and seventy thousand two hundred and thirty-two boxes and two hundred and forty-four thousand six hundred and seventeen crates have been handled

for us by our various agents. The gross sales on these have amounted to \$1,501,023 56, out of which there has been deducted for freight, cartage, commission, and cold storage, \$158,438 58—a total of \$779,000 leaving \$721,896 81 as net returns to those shipping; while we have nearly one hundred cars of late pears, etc., yet to hear from, which will swell the amount of the gross sales probably \$100,000 more.

You have all become so familiar with the condition of the market during most of the past season, that it is unnecessary to dwell of the scarcity, in fact, almost complete failure, of all local fruit. It suffices it to say that the market competition of the home grown fruit to our California fruit amounted to absolutely nothing until the beginning of their grapes began, which was about the middle of September.

The prices realized in all of the three large cities, Chicago, New York, and Boston, have often been remarkable, while the season's work at all points have been quite satisfactory.

The early shipments of cherries were most discouraging, as they arrived in extremely poor condition and sold very low, in some instances bringing the shipper out in debt. These circumstances have been very materially cut down consignments. We are glad to hear, however, that those who continued to send this delicious fruit forward were more fortunate, as all the later shipments arrived in better condition and sold extremely high, thereby causing the prices realized on the consignments to be, in the main, more satisfactory. The final shipment of cherries, which was sold in Chicago June twenty-fifth, brought the largest returns of any car ever forwarded through the Union.

All other fruits carried and sold remarkably well until grape shipments began, when exactly the same state of affairs was experienced with the cherries, only not to so great an extreme. All the early shipments by far the larger portions of the consignments carried very poor and sold correspondingly low, while the unfortunate shipper has expressed poor satisfaction with which to console himself of knowing that they carried ever so well, and been placed upon the market in poor condition, prices most surely could not have ruled high, as the grape crop was an extremely heavy one, and all the markets were overflowing with local fruit, great quantities of which were sold at prices less than the cost alone of transportation on our produce.

Our shipments have embraced all the varieties of deciduous fruit grown, among which might be mentioned two full carloads of peaches from Santa Barbara.

The season, although somewhat backward in opening, has been correspondingly late in closing. Where, in 1889, we started on the eighteenth, this year the first car was loaded about equally by Wright and Newcastle, and left the State May twenty-first, while on the thirtieth cars were loaded with grapes at both Wrights and Newcastle. These being refrigerator cars, to insure safety against frost, were forwarded by slow freight, and arrived so that they were sold in the December nineteenth and twentieth, from which it will be seen that we furnish our fruits, grown in the open air and fresh from the vines, to the friends on the less favored side of the continent nearly to January, or about eight out of the twelve months of the year.

Some action should certainly be taken to impress upon the different railway companies benefited by our shipments the extremely urgent necessity of building, during the present

season, a thousand new fruit cars, that they may be all ready for next season's operations.

To one unacquainted with the facts, it may seem strange that with the number of cars of the various lines equipped for the fruit service, there should be any difficulty in securing proper cars upon very short notice; but such is only too truly the case, as during the past season there were times absolutely no cars to be had.

In the matter of time required by the various railway companies in order to deliver our cars, this has been by far the worst season we have experienced. That a car should arrive on schedule time has been an exception, so that from July to the end of the shipping season one could scarcely go amiss, should they say that every car was from several days to several days late on arrival.

Cars have been as many as twenty-two days in transit, causing in many cases heavy losses to the shippers, and had the yield in the East been even an ordinary one, no one can estimate the losses these ever-rising delays would have caused our consignors.

So common were the late arrivals, that it was simply impossible to make time shipments that cars would not reach their destination Sunday mornings, or to so arrange that two trains shipped on different days would not arrive in the East within a few hours of each other. In fact, this was several times the case, so that there entered into the lottery of eastern shipping another factor, with its percentage largely on the reclamation side.

It might not be out of place to state, that after a thorough investigation of the causes leading to these vexatious delays, and an endeavor to ascertain to which of the trunk lines the responsibility for the same belonged, it has been found that with comparative few exceptions, the late arrivals have occurred east of Ogden, thus relieving, in a great measure, the local lines from the severe criticisms with which we must certainly address the other roads.

The management has taken up the matter of claims for losses caused by such poor delivery, and expects soon to be able to so adjust matters as to make it, in a measure, satisfactory to all concerned.

Some forty-three new names have been added to our list of stockholders, and the paid-up stock now numbers fourteen thousand one hundred and sixty-two shares.

Financially, the Union was never so prosperous as now. With all debts paid and nothing outstanding, there still remains in the treasury the \$34,000 as the result of the season's work. The receipts and expenditures can be seen by examining the following

YEARLY STATEMENT.

Expenses	\$1,614 49	Stock account	\$15,174 25
Profit and loss	12,657 97	Reserve Fund	865 64
Freight	6,460 42	Rebate No. 2	185 11
Selling expenses	1,468 71	Dividend No. 1	94 16
Office fixtures	660 75	Dividend No. 2	168 42
Telephone	365 60	Dividend No. 3	207 18
Light and loading	250 57	Rebate No. 3	314 91
Graph account	2,881 10	Eastern agents	43,738 21
.....	31 25		
.....	33,916 92		
.....	430 00		
.....	\$60,737 78		\$60,737 78

At a meeting of the retiring Board, held January 20, 1891, by a unanimous vote the Reserve Fund received \$100 additional. A dividend of 2 per cent was declared due and payable at once on all fully paid-up stock, and a rebate of $2\frac{1}{10}$ per cent on the gross sales of all members made through the Union was made, thereby reducing the commission on each consignor to $7\frac{9}{10}$ per cent.

These several disbursements will foot up about \$32,500, thus leaving on hand all available funds on hand, as the policy of each successive year has been to allow each year to meet its own expenses, thus leaving them to pay out, in the form of dividends and rebates, all the money in the treasury at the time of the recurring annual meetings, leaving only the amounts due members for previous divisions, which have not as yet been seen fit to collect, and the Reserve Fund.

Finally, bespeaking for the incoming Board and the new year which may be elected the same hearty support you have accorded those who are now about to resign their charges, and trusting that all be spared to reassemble January 20, 1892, we close our report on the work of the California Fruit Union for the season of 1890.

H. A. FAIRBANKS

Secretary

RAMIE.

NEW INDUSTRY FOR CALIFORNIA, ADMIRABLY ADAPTED TO ITS SOIL AND CLIMATE.

The Ramie Fiber Machine (exhibited by W. H. Murray, State Superintendent of Ramie Culture, at the State Fair), for separating the fiber by the dry process, opens up immense possibilities for California.

The ramie plant, known to botanists by the name of *Boehmeria*, a stinging, stingless nettle, is indigenous to Java and China, where it has been used in constructing fabrics for hundreds of years.

France, Germany, and England depend on those countries for ramie, and from it they manufacture a great variety of fabrics that are used for linens and silks, laces, handkerchiefs, lace curtains, white goods, table damasks, table covers in colors, reps, plush velvets, carpets, and a great variety of similar goods. It is used in the manufacture of silk dress goods, the warp partly or entirely composed of ramie, adding to the strength and body of the goods without depreciating their beauty, with a saving of 30 to 60 per cent of the silk otherwise required.

Ramie fiber receives the most delicate shades, as well as the most brilliant dyes, retaining them more tenaciously than any other fabric; it has the quality of being very repugnant to moths, and is never eaten by them. The tensile strength of ramie fiber is 40 per cent greater than that of cotton, being one of the strongest and most durable of fibers, and the least affected by moisture. Its filaments can be separated into floss as fine as hair.

A string of ramie supported a weight of two hundred and fifty pounds, while a string of hemp of the same thickness broke with only fifty-five pounds weight. These characteristics cause it to rank next in value to silk as a textile fabric.

The ramie plant is easily cultivated, yields enormously on rich, fertile, sandy, loamy soil, and is successfully grown in the Southern States, the difficulty to contend with being the moisture of the climate, which is unfavorable to drying the stalks, which are filled with moisture, and unless thoroughly dried soon after being cut they become moldy and mildew and are worthless for fiber. Therefore, in a wet climate it is necessary to separate the fiber immediately after cutting, while the stalks are green, by what is known as the wet process, which is attended with greater expense.

The dry, hot summer climate of California more nearly conforms to the natural requirements of this semi-tropical plant, and the stalks dry without difficulty here. With suitable soil and good cultivation, after the plants are well rooted, several crops can be realized each year of from one thousand pounds of fiber at each cutting.

The soil best adapted to the growth of ramie is one that is friable and irrigated naturally. No matter how dry the surface, if there is moisture six to ten feet below the surface, the long water roots, with their thick clusters of rootlets, will find an ample supply. It will grow on all lands if not too wet.

The most satisfactory results are obtained by planting the plants six feet apart each way. Thoroughly cultivate the plants until they are sufficiently mature to layer the stalks. Then, after thoroughly tilling the soil, bend down the stalks in all directions from the parent plant, cover them with earth, except a few inches of their upper ends. The buried stems will send out roots at each leaf, and sprouts will grow



them, and the ground will be thickly covered with plants the following year, which is very important. After the layering there is no more cultivation required, except one or two light weedings in each crop, the ground is so thickly covered and shaded that weeds and grass cannot grow. No further cultivation is required in after years.

The crop can be cut with a mowing machine; and after it has lain on the ground some time, until the stalks are cured and sufficiently dry, they can be bound into bundles, and haul to the machine to be decorticated for fiber. Ramie leaves are very valuable for paper making.

The great advantage in California over the rest of the United States is the dryness and heat of the summer climate, causing the stalks to dry at once, so they can be decorticated and worked dry, producing a product of superior commercial value at greatly reduced cost in all the processes of its production.

A new machine was exhibited at the State Fair in the Machinery Department, in motion, which produced fiber in satisfactory quantities and quality, from California grown stalks, sent by Prof. E. W. Hilgard, from the Experimental Gardens, University of California. Samples of the product were sent to London, Boston, and other points, and pronounced by fiber brokers and manufacturers to be equal to the best fiber in the markets. A sufficiently high price has been offered for the product to make it a very profitable crop to grow. The California Ramie Company at San Francisco has been formed to promote this industry.

The successful production of ramie fiber in California is now beyond the experimental stage. It has been demonstrated that two or three crops can be raised annually, and, most important of all, they can be quickly dried on the ground and worked by the dry process at a minimum of cost compared with that of a moist climate.

Ramie is easily raised, no crop requiring so little outlay after the first year. It has no disease or insects to contend with, and as two or three crops are obtained the second and following year, the returns from the investment are sure and speedy. The coarse parts are suitable for the manufacture of gunny cloths and paper stock, and for cordage, rope, threads, and fishing-nets it has no equal in strength or resistance to decay from moisture. It may become to California what cotton is to the Southern States.

Regarding ramie culture, the California Ramie Company gives the following information, viz.:

Ramie will grow on any good soil that will produce other crops; a deep alluvial, sandy, loamy soil, well prepared, which holds its moisture during the growing season or which can be irrigated, is peculiarly adapted to a prolific growth. It may be grown in any portion of our State where frost does not penetrate the soil for a greater depth than six inches, and where, during harvest time (June to October), the atmosphere is free from dampness, in order to thoroughly insure the drying of the stalks.

The best time for planting is during the rainy season. After the ground has been thoroughly prepared by plowing to a uniform depth of about ten inches, and well pulverized, the roots should be planted in the first year, for the special purpose of propagating, three or four feet apart and slantingly, covering the top with two or three inches of loose earth. The first season the ramie requires careful attention and cultivation; the plants should be kept clean and loose around the plants until they get a good start. When the first stalks have attained the height of about three feet, they are ready for layering. The ground should then be thoroughly moistened and the stalks bent gently to the ground, fastened with small crotchets and covered with three or four inches of earth, leaving the top of the layered branch uncovered. Care should be taken to avoid detaching the stalks from the parent root. In the course of three or four weeks the layers will have attained the height of about three feet, and quite a number of them can be dug out for transplanting in order to increase the plantation. While layering is a very simple and easy method of propagation, cuttings can also be made early in the spring; the stalks should be cut into lengths of from five to six inches and placed in the ground obliquely, leaving but a small portion remaining exposed. This can be continued as long as the ground is moist, and before hot and dry weather sets in, after which they would require watering and shading. The cuttings should be placed close together to facilitate weeding. They will form roots in about fourteen days, and may be planted a few weeks later. Roots which have been growing one season can be subdivided into hundreds of parts from three to four inches long, each root planted separately. No plant responds to care more readily; no plant will grow as rapidly; no root

multiply quicker and produce more stalks; in fact, no vegetable fiber is richer, and more silky than ramie. By the method of layering, the entire bed is covered with plants in the following year, and the stalks, growing closely together, be straight and without branches, thus fit to be ready for the mower and harrow after the stalks have been dried.

The leaves of the plant should be left on the ground as a very valuable fertilizer. After two or three years the roots will form a solid bed from row to row, room for cultivation. It might then be necessary to use a sharp rolling cultiva- ming the beds or hedges to a width of not over two feet. The method for should be to cut or trim from one side only and allow the roots to spread on side. This would annually remove the old hard wood, keep the roots renewed, and perpetuate the crops.

The Secretary of the United States Department of Agriculture report for the year 1889, says:

The vexed question of the establishment of the ramie industry, while more to success than at any previous time, is yet beset with difficulties. Ramie has been produced in both hemispheres, concerning which we may record factory performances in regard to the mere production of "ribbons," or of good quality, but in the consideration of quantity and ability for continuous something remains to be desired.

Recent discoveries in this country in degumming the fiber of ramie, and in of ramie spinning—on woolen and cotton machinery from carded fiber—are indications of a future for the industry, from the manufacturers' point of view, in try, when difficulties in the earlier preparation of the fiber shall have been fully. The question is not so much whether this country can produce flax, jute, or other textile fibers, as whether the farmer can find a market for those he may produce. The manual labor heretofore necessary in the separation of the fiber from the stalk, competition with the cheaper labor of other countries, rendered it impossible for the fiber industry here to maintain an economic standing, and our only hope is the invention of decorticating machines that shall take the dry stalk or the green case may be, and produce the fiber in one or in two operations in a short minimum of cost, and without the primitive manual labor incident to the rolling, ing, pounding, etc.

Mr. William Lichtenberg, a prominent fiber broker and commission merchant of San Francisco, says:

No part of the United States is better adapted to the cultivation of this plant on the Pacific Coast. Especially is this the case with California, her soil and climate fitting the natural conditions of ramie. The farmers of California are beginning to engage in the cultivation of this prolific plant, when a ready market for their product is now assured. One acre of roots will yield enough stock by layering in place the following year. After a well managed start, five thousand roots set out per acre soon completely cover the field as if it had been sown in wheat.

Also, the same writer makes some careful estimates of what can be looked for by planting ramie:

Calculating that five thousand roots have been planted per acre on thoroughly cultivated, good, moist land, the yield after one year's growth may reasonably be expected to result in forty stalks per plant, each averaging one and one half ounces in weight. This would give three hundred thousand ounces, or eighteen thousand seven hundred and fifty pounds per crop per acre. Supposing the yield to be only 15 per cent, the fiber, equal to two thousand eight hundred and twelve and one half pounds, would be \$225; or from three crops, equal to eight thousand four hundred and seven and one half pounds, at 4 cents, would be \$537 50.

Decorticating costs about 1 cent per pound, which the grower has to deduct from the above.

F. O. Vincent, Gardener of the State Capitol grounds, in answer to an inquiry regarding this valuable plant, says:

Your inquiry received in regard to ramie culture. In answer thereto we Asiatic experience shows that paying crops are taken after from six to ten years. The plants are fairly well cared for. I should judge by the structure and growth of the plant that an overflow in winter, during the resting (dormant) period, for six weeks, would not materially injure it. The injury, as a matter of course, is more severe in stiff, cold, naturally wet places than in loose, well drained places. Plants would be more apt to be damaged than older, well established ones.

DECORTICATING MACHINERY.

The following letters and judges' reports from the late State Fair and Mechanics' Fair, San Francisco, will be of interest to many. From the report it will be seen that suitable machinery has been exhibited that can work the ramie stalks by the "dry process" successfully in California—no water nor chemicals being used in the decortication. After the fiber has been placed in bales and sent to the manufacturers, it is well understood that a very weak alkaline bath has to be given to bleach the fiber and prepare it before being used in the mills to be worked up into textile fabrics; but the strength is unimpaired, being suitable for rope, cordage, and many other lines of trade—it being fully understood that it is the strongest vegetable fiber known:

The undersigned, have witnessed the working of the ramie machine, exhibited by H. Murray, of San Francisco, at the Machinery Hall, State Fair, Sacramento, during the exhibition of 1890.

We know the foreman, Mr. Lightfoot, who had charge of the machine in that department, to work the ramie stalks furnished him by Prof. E. W. Hilgard, of the Experimental Gardens at Berkeley, California. The stalks were placed in said machine and successfully decorticated, delivering the fiber out in a clean and straight manner without the use of any water or chemicals, the process being known as the "dry process." It can be easily worked and operated by two helpers, and large quantities of ramie can be run in the machine in any given time.

We are fully satisfied that the fiber decorticated by the machine has a commercial value, and the working of same has proved to be an accomplished success.

O. P. DODGE,
Assistant Superintendent of Pavilion.
GEORGE BOYNE.
CHARLES B. HERNDON.

At the trial made of the decorticating machine at the Mechanics' Fair, on October 9, 1890, in San Francisco, the machine worked the ramie stalks dry. The fiber came out in a good manner, and was pronounced by experts that were invited to be of a commercial value. We give a copy of the report made by the committee:

It is estimated from the test, at a trial made at the Mechanics' Institute Fair, October 30, that one hundred pounds of crude ramie fiber can be run through in one hour on two feeders, on the machine exhibited by W. H. Murray.

J. Y. MILLAR,
Secretary California Cotton Mills.
JOHN RUTHERFORD,
Foreman California Cotton Mills.
R. W. WHITNEY,
Mechanical Expert.

The following is a letter from Francis Moore, the person in charge of the same machine at the Mechanics' Fair:

SAN FRANCISCO, CAL., April 7, 1891.

H. MURRAY, Esq.:

SIR: In answer to your inquiry, I would say that I managed the ramie decorticating machine for five weeks at the Mechanics' Institute Fair last fall. I am not a machinist nor an engineer, but very soon became accustomed to the machine, and ran it without trouble. The ramie stalks had to be laid on the floor at the end of the machine, picked up from there and passed into the rolls. Of course the full capacity of the machine could not be obtained in this way, but it did good work, almost perfectly clean. The fiber of "chives," that is to say, the inside pith and woody parts. I should have hesitated in undertaking to run this machine on a crop of ramie, and believe a good deal of merchantable fiber would result.

Very truly yours,

FRANCIS MOORE.

To show that ramie fiber can be worked in our local mills, a committee was named to report on same, which they did, as follows:

Directors Mechanics' Institute: MECHANICS' PAVILION, SAN FRANCISCO, October 1890.

GENTLEMEN: Having seen the ramie machine exhibited by W. H. Murray in practical operation, and producing fiber from the ramie stalks, we are pleased as manufacturers of cotton goods, jute bags, and cordage, that we can work made by said machine and produce articles of commercial value therefrom. In this fact, we will soon be able to present to your honorable body samples of the same and other goods.

Respectfully yours,

J. Y. MILLAR,
Secretary California Cotton Mills Company
WILLIAM RUTHERFORD,
Superintendent California Cotton Mills Company
ALEX. CENTER,
Director of the California Cotton Mills Company

We quote from Mr. Wm. Lichtenberg's circular on ramie:

Our climate favors the process of thoroughly drying the stalks after being spread, and when our machine is operating, it turns out about two thousand pounds of fiber per day.

Realizing the peculiar adaptability of much of the Pacific Slope to the large successful growth of the ramie plant, the California Ramie Company has, at present, placed itself in possession of the necessary machine, in every way adapted to the desired, and is confident that our State will soon enter upon a new era of ramie culture, that factories must of necessity, ere long, come into existence to utilize this valuable product.

A witness of the machine in working order writes as follows:

Mr. W. H. MURRAY:

DEAR SIR: Having seen a ramie machine working at the Mechanics' Fair last year, believing that it will break ramie so as to make a merchantable article, and knowing the value of ramie fiber for the manufacturing of the finest fabrics, I feel that all that is removed that have stood in the way of making ramie culture a success in California. Yours respectfully,

C. T. WILSON

AN ASSURED MARKET FOR RAMIE FIBER.

The following is a copy of an agreement made by a ramie grower of San Francisco:

The California Ramie Company, of San Francisco, will pay the sum of \$1.00 per pound net for crude merchantable fiber to the grower, less 1 cent per pound for retting, and less the expense of delivery of ramie stalks to the machine, and less the expense of the bales of fiber that he may own or control. These he shall deliver F. O. B. nearest railroad or steamboat landing, for shipment to the above named company. Also agreed that the stalks shall be delivered in bundles, so that no trouble will be caused when the stalks are being fed into said machine.

Should the growers representing the ramie station in any one district deliver F. O. B. to the California Ramie Company at the next or nearest station.

It may be well to give some extracts of letters received by the Culture Department of the State Board of Agriculture of California, addressed to W. H. Murray, Superintendent of Ramie Culture, and which are on file in his office.

Shortly after the close of the State Fair samples of the crude ramie fiber that was decorticated by the dry process were sent to all parts of the world for inspection, and to get quotations and to find if it was a merchantable fiber.

Some of the many replies are here appended:

LONDON, E. C., 72 MARK LANE, October 22, 1890.

H. MURRAY, San Francisco:

I send you two samples ramie fiber to hand this day. Both are about the same value. To-day I could sell fifty tons of your No. 2, at £16 per ton, free London, 2½ discount.

IDE & CHRISTIE,
Fiber Brokers.

THE TOPPAN-HOWLAND CO.,
BOSTON, MASS., December 30, 1890.

H. MURRAY:

The fiber as it appears is some of the best, if not the best, decorticated ramie fiber which we have ever seen, and we would be pleased to know more about your machine for retting.

THE TOPPAN-HOWLAND CO.

THE TOPPAN-HOWLAND CO.,
BOSTON, MASS., December 31, 1890.

H. MURRAY:

DEAR SIR: We note your activity in agitating this matter. We trust you may be successful in the same. We are engaged in preparing the compounds for treatment of fiber and it has been raised. There is, however, no question but what as much ramie as you raise, certainly for the next few years, can be marketed at a very good price. One of our carpet manufacturers in the East has offered to pay us a handsome price for a lot of thousand tons, as fast as we can give it to him.

Mr. Toppan is to-day treating the samples, and reports very favorable results, so

THE TOPPAN-HOWLAND CO.

THE TOPPAN-HOWLAND CO.,
BOSTON, MASS., February 25, 1891.

H. MURRAY:

We wired you that ramie fiber, as per the sample sent us, is worth 5.7 cents per pound delivered in Boston, or with the dirt and dust removed, 7 cents per pound. The shrinkage of the sample which you sent us, shows a total loss of 28 per cent. I note the receipt of your fiber worked dry, which is very fine indeed, and thank you.

THE TOPPAN-HOWLAND CO.

HAMBURG, GERMANY, November 21, 1890.

H. MURRAY:

Samples of ramie fiber we have shown to our brokers, and they estimate it worth between 30 marks to 40 marks per 100 pounds German weight. Send five to ten bales for trial, thus obtaining enough to know the real value.

ALEX. OETTLING & CO.,
Hamburg, Germany.

California Cotton Mills Company, of East Oakland, Cal., writes as follows:

OFFICE OF THE CALIFORNIA COTTON MILLS CO.,
EAST OAKLAND, CAL., February 19, 1891.

H. MURRAY, Esq., San Francisco:

DEAR SIR: I was much pleased to see your ramie machine at work. The fiber produced is a marketable article, and could be easily used in the textile industries. It could be bleached, and finished very well without danger to the strength of the fiber. There is no question about the commercial value of the material or the possibility of raising ramie in California of the finest kind. What you need is the farmer to take some interest in the matter, and do something to develop this very important branch of industry.

Yours truly,

WILLIAM RUTHERFORD,
Superintendent California Cotton Mills.

Mr. A. M. Bruce, of the flax mills located in San Francisco, writes as follows:

SAN FRANCISCO, February

To the California Ramie Co.:

GENTLEMEN: Having seen samples of the ramie fiber produced by a machine at the late State Fair and the Mechanics' Fair, it appears from the samples that the gummy substance contained in the stalk, which has caused so much expense heretofore, has been so far removed as to leave the fiber in good condition and suitable for all uses to which we design to apply it in our ramie mill now in construction in this city.

We believe the ramie fiber will take the place of hemp and flax among the bolls and when our mill is completed we will be ready to purchase ramie fiber like the shown us, and other fibers, at their full market values.

The sample of ramie fiber shown us for our inspection is the best we have seen and has exceedingly important advantages in being produced by the dry process which no chemicals are used, leaving the strength of the fiber entirely unimpaired and largely increases its commercial value for the manufacture of fine twines and

Respectfully,

ALEX. M. BERRY

Supt. Flax Mill, Seventeenth and Channel Sts., San Francisco

RAMIE CULTURE.

Some extracts from a bulletin on ramie culture that Prof. E. W. Ward, Director of the Experiment Stations at Berkeley, published in the early part of 1891, are presented:

"Ramie will grow in our climate to perfection, not only on good soil, but also on alkali lands, which are practically worthless for other purposes; that from two to three crops a year can be cut, and that uninterrupted, prolific growth will be the result.

"On the strong, black, adobe soil of the Berkeley experiment station where purposely no return or fertilization of any kind has taken place, the crop of 1890 was fully as large as any previous one within the last ten years in which weighings have been made. Owing to the constant use of plants, the ground has never been solidly occupied by the crop, even in the year in which the plot was reset in spring with new stocks, the product was nearly up to the average, so rapidly do the plants tiller and spread.

"Among the strongest soils in the State are those containing much less of 'alkali,' and as these are mostly valley lands, the question of their adaptation to ramie culture is important. Experiments have shown that while ramie is a little more sensitive to alkali than alfalfa, it will stand all but the strongest spots, provided the alkali is not of the 'black' kind, viz.: carbonate of soda; and as the conversion of alkali into 'white' is easily effected by the use of proper doses of sulphur or gypsum, it may fairly be said that with this proviso ramie can be grown in alkali lands available for little else, since the growth of alfalfa cannot be carried beyond a limited point with profit to the producer, on account of its relatively low value and heavy weight in transportation.

"The main reason why ramie will grow in alkali ground is that, as in the case of alfalfa—because it shades the ground, and by its evaporation, going on through the leaves of the plants instead of the surface of the soil, will not accumulate the noxious salts around the root crowns so as to corrode them.

"It should be said, as regards the culture of ramie, that by adoption it has been found to be readily feasible in all the larger valleys of the State, so far as the successful growth of the plant is concerned, but that it will doubtless prove most profitable where a long season, combined with irrigation, permits of making three or four

croppings annually. In the Kern Valley there is little difficulty in getting four crops of good size and quality, and the same is probably true on stronger soils as far north as Fresno, and southward in the valley of South California. In the Sacramento Valley, three cuts can doubtless be obtained, at least when irrigation is employed, or in naturally moist lands.

"We find that the product has been at an average rate of about five thousand seven hundred pounds of dry stalks per acre for the first cut, and about three thousand three hundred pounds for the second. The gross weight, of course, would be somewhat less in the dry air of the interior of the State; but the figures show that on strong soils the expectation of eighteen to twenty thousand pounds per acre, where four crops can be made, is not extravagant. The minimum product from dry stalks is estimated to be 15 per cent of raw merchantable fiber. Upon these data an approximate estimate of the crop, and of its financial value, in the several climatic regions of the State may be based."

Dry Process Favored.

The dry process also possesses the advantage that each machine can be kept running continuously, on practically uniform material.

"The 'dry' process differs from the 'wet' in that the stalks, cut at the time when their oldest portion is just turning color, from green to a brownish tint, are first allowed to dry in the field, if this can be done, and when fully dry are at once subjected to the action of breaking, and then to beating or combing machines that remove stalk and bark with gum in proportion to their perfection, leaving, again, the crude fiber more or less ready for the alkaline bath.

"It will readily be understood that the dry mode of working is best adapted to a dry climate, in which the stalks and gummy bark become brittle that the breaking and beating is effective to a degree which it would be impossible to attain in moist climates.

"Caustic lye dissolves the gum easily but weakens the fiber.

"So far, then, as the successful and profitable growth of the plant is concerned, there need be little doubt in the valleys of the central and northern parts of the State, so soon as the processes for marketing the product shall be an assured success."

Extracts from letters received by Mr. W. H. Murray, from Professor E. W. Ward, in regard to ramie culture:

"The advantage over flax is cheapness and less soil exhaustion; more brilliant fiber than cotton; more wear to it than cotton; not more than flax; does not break in the wash as easily as silk, and the mixture to silk ranges, 0 to 100 per cent.

"The ramie roots will stand an overflow of water for eight to ten days.

"It is not difficult about getting the roots out; turn a sod and let them die. When the stalks join after five to seven years the stalks become thinner, and the better for it; but while you must fertilize, and after ten to twelve years, change. All trash should be put back. Strongly built mowing machines can be used.

A BOUNTY FOR RAMIE FIBER.

To encourage the production of ramie, the twenty-ninth session of the Legislature enacted a law, which was approved by the Governor on March 31, 1891, that an appropriation should be made to purchase

ramie roots for free distribution. The first two sections of the bill are as follows:

SECTION 1. For the purpose of encouraging the cultivation of ramie in the State of California, there is hereby appropriated out of any money in the State Treasury otherwise appropriated, for the forty-third fiscal year, the sum of five thousand dollars; and for the forty-fourth fiscal year the sum of five thousand dollars.

SEC. 2. Said appropriation shall be under the direction and control of the Board of Agriculture, and may be expended as said Society may direct, either for the purchase of ramie roots for free distribution to farmers, or in the payment of a bounty on merchantable ramie fiber; but no greater sum than one thousand dollars shall be expended in any one year for the purchase of ramie roots, and no greater amount than one thousand dollars shall be paid as a bounty for merchantable ramie fiber. Any portion of the appropriation for the forty-third fiscal year remaining unexpended may be used by the Board of Agriculture for the payment of bounties during the forty-fourth fiscal year.

To show the importance of the ramie bill and the interest in it, the following petition, presented by Senator Maher, is quoted in the Journal of the Senate of January 28, 1891:

To the Senate and Assembly of the State of California:

We, the undersigned, farmers and citizens of the State of California, do hereby pray your honorable bodies now in session at Sacramento, Cal., that

WHEREAS, The revival of the question of ramie culture is being brought before prominent parties in San Francisco; that they have demonstrated that the experimental stage has passed; and that now, we in California are the first to show that ramie can be grown and worked successfully in the United States.

We desire to call your attention to this important fact, and pray that the bill to your honorable bodies, on ramie culture, will be considered by you.

All fiber culture should be fostered, and diversified farming should be encouraged in this State to its fullest extent. Wine, vine, and other interests having received the attention and assistance should be extended to fiber culture. Your petitioners will respectfully ever pray.

PETITIONERS.

Hon. George H. Sanderson, Mayor of San Francisco.	Mr. W. B. Ewer, "Pacific Rural Press."
Hon. E. B. Pond, ex-Mayor of San Francisco.	Neville & Co., bag manufacturers.
Hon. Geo. C. Perkins, ex-Governor of California, also President of San Francisco Chamber of Commerce.	Ames & Detrick, bag manufacturers.
Mr. John Center, California Cotton Mills, also Center's Flax and Ramie Mill.	S. Koshland & Co., bags and bagging.
California Jute Co., Louis G. Lissak, Sec.	Mr. Wm. Lichtenberg, fiber broker.
Emory E. Smith, editor "California Fruit Grower."	Mr. R. C. Gallego, bag broker.
Mr. Adam Grant, of Murphy, Grant & Co.	Starr & Co., flour merchants.
Mr. Claus Spreckels, Cal. Sugar Refinery.	San José Fruit Packing Co.
Gen. W. H. Dimond, Supt. U. S. Mint.	Merry, Faull & Co., pork packers.
Benicia Agricultural Works, by L. L. Baker.	Mr. Ed. Kruse, ex-Pres. of Pioneer Trueman & Hooker, agriculturists.
Hon. N. W. Spaulding, Pacific Saw Works.	Mr. J. Wm. Lucas, plaster mills.
Mr. Abner Doble, manufacturer.	Mr. J. M. Moore, Farmers' Alliance.
	Mr. J. W. Hines, Treas. Farmers' Alliance.
	Mr. A. T. Dewey, Sec'y State Grant.
	Mr. Geo. H. Strong, patent agent.
	Mr. Charles G. Yale, editor "San Francisco Mining Press."

STORY OF THE HORSE LIFE OF CALIFORNIA'S MOST SUCCESSFUL BREEDER, MR. JOSEPH CAIRN SIMPSON.

BREEDER OF ANTEEO (2:16 $\frac{1}{2}$), SOLD IN FEBRUARY, 1891, FOR \$60,000, AND OF ANTEVOLO (2:19 $\frac{1}{2}$), HIS FULL BROTHER.

WIN F. SMITH, Esq., Secretary California State Agricultural Society:

DEAR SIR: Your request that I would contribute a sketch of my horse life for publication in the Transactions of your Society for 1890, was a puzzle, whether I could respond in the affirmative without running counter to "established custom." That has been to refrain from putting my own horses before the public, unless it was to exemplify the point in breeding, training, or stable management. My field of experiments has been somewhat extensive, and in presenting them, and giving the results of divergences from the usual course, it has necessarily followed that the subjects of these experiments were given prominent positions; more so, perhaps, than their merit warranted. But in yielding to your wishes, if even I should be charged with a display of egotism, it may be that the matter presented will prove of interest enough to horse-folk to remove the stigma of self-laudation.

RETROSPECTIVE.

It is a "long look back" to cover that portion of my life which has been devoted to the horse, and still further into the shadows of the past when my first connection with them began. Not exactly horses, as the first animal I ever owned was of an ignoble kind. Nearly sixty years ago an English lady, a friend of my father, spent several of the summer months with us. She was an invalid, and not far from our home was a spa which was celebrated over the south of Scotland for its hygienic properties. She rode a small white donkey in her daily visits to the well, and when she left our house she made me a present of the animal. A more welcome present to an invalid of six or seven years could not be, and as it was remarkably gentle there were no parental objections. Given its head, and a gentle touch to the spa and back was done without urging; but all the persuasion I could offer had no effect to bring about the much desired gallop, the riding whip which accompanied the present was of the slightest. Then, too, all the gentlemen of my acquaintance rode with spurs, and I brought my grandfather to loan me his. He had bought a saddle for me, and I was so much of a pet with him, and the wish seemed to prevail with his notions, that an interdict from my mother was all that stood in the way of gratification. It was not long, however, until I had a substitute. When the summer carpeting was removed and I was put down I secured some of the tacks, made holes through the leather part of my shoes, the large leather-covered heads did not hurt my

heels, though a good deal of pain would have been endured in the glory of the cavalier equipment. On the way to the spa in and when far enough off to be out of sight, the first jab was a whisk of the tail and a toss of the head were the responses, and touch was given with a will, both heels in unison, and also in came the elevated heels of the donkey. There was little mane but a good hold was obtained by encircling her neck with both arms and if the improvised spurs could have been kept from torturing in all probability she would have become quiet. The position was that difficult, and the bucking, vigorously persisted in, got me in incubus and spurs at the same time. Some scratches, a black and torn clothes told the story, the bent tacks giving the cue, and a real sorrow came when I saw her sent away. My grandfather rode me to the best of his ability, and promises of a pony when a little older, a galloway when I got in the teens, one that could follow the silver spurs, a genuine hunting whip, and all the trappings of a hunter of the hunt.

An inborn love of the horse was heightened by early association for the present purpose it will be better to omit all previous to the chase of Blackbird, as the ownership of that horse was the sole of my initiation into horse life. I took my family to Iowa in 1852, a business which I had mainly followed in northern Pennsylvania. I was "brought up," was surveying, and that gave me the opportunity of making some good selections of Government land, and I was quite successful in that way from 1852 until the panic of 1857 and 1858, resulting crash in real estate, especially wild lands. My business required frequent trips to Dubuque, where the land office was located, and late in the season of 1855 I stopped at Andrew, the county seat of Jackson County, Iowa, for dinner and feed for my horses. Two gentlemen accompanied me, and as we were taking our after-dinner stroll the landlord informed us that a remarkably fine colt had been brought there. "He will just suit you, Mr. S —," he said, "as he is a big, good looking colt, but is said to be a fine racehorse, and of a breed which you are always praising." The eulogies of the colt were indorsed by the appearance of the animal. Black, a deep color, without that dingy hue which is often seen in black horses, a little tan in flank and around his muzzle, the only white a little in center of forehead. But as his blood has been a "potent" mixture of California-bred horses, I will copy a description of him I wrote at his death, and which I endeavored to give as nearly correct as was in my power to portray. By copying that much of the chapter "Horse Portraiture") in which the description of Blackbird is given, I refer to my first training experience, that much of the chapter will be applicable. It will be proper, however, to state that Blackbird was written in 1863; it was published in serial in the "Turf, Field, and Farm" and appeared in book form in 1868, being the first book ever published on training trotters, and the only one, so far as I know, in which the author was joined. Charles J. Foster edited Woodruff's; then of the "Breeder's Gazette," Splan's; and Leslie E. Mackay accomplished editor of "The Horseman," put Marvin's system into shape. It is also necessary to explain that the plan was after Walton's "Complete Angler"—conversations between two

men, giving a fuller scope for illustrating, but without the remotest idea of rivaling that greatest work of the kind ever printed. I may be pardoned for stating that it was well received, ran through several editions, and would have been still in print if the stereotyped plates had been recovered.

Inasmuch as this communication is intended to be an outline sketch of my life with horses, it will not be inappropriate to include cognate facts and my connection with equine literature, and therefore a brief statement of my newspaper work will be given. That part of Pennsylvania where my boyhood's days were spent was hilly and rough, plains and level land being generally restricted to river and "creek bottoms," and "big woods" in many sections, a great deal of uncleared lands in all the northern counties. Fifty years ago game in abundance—bear, deer, wolves, foxes—the streams full of speckled trout; lakes, which were numerous, stocked with a variety of fish. Passionately fond of the sports of "gun and rod," the paper of all others which interested me most was the "old" "Spirit of the Times." While the sketches and articles relating to shooting and fishing were the most eagerly sought, the portraits of the old-time horses and the vivid delineations of the old-time races were read with nearly as much satisfaction.

The first articles I ever wrote for a metropolitan paper were sketches of the "Spirit," and, trusting to memory, the first effort in the horsey line was made in 1858; and the fall of 1859 I wrote reports of the big Louis Fair for the "Democrat" of that ilk. At that time I met George Wilkes, who solicited me to do some work for his paper, and I did the old "Spirit" suspended (it was never resuscitated) in 1861, declined. After that I wrote a number of articles for "Wilkes' Spirit." In 1863 I had a long controversy in that paper with "S. T. C." of Cincinnati, Ohio, "On the advantage of racing blood in fast trotters," he supporting the negative in his able and forcible way. Still, I am confident that I had the right side of the argument, and my predictions for the "royal line" were strengthened by that and succeeding sales. William T. Porter, the editor of the old "Spirit," was a staunch advocate of the blood, and Henry W. Herbert ("Frank Forrester") and other correspondents took the same ground, so that my early impressions were supplemented with eulogies of the thoroughbreds, and in the time I heard the praises of blood, when a little boy, until now, I have never lost faith that for all purposes, where speed and endurance were sought, a dash of it was good, and the bigger the dash the better. Then the "Turf, Field, and Farm" was issued, the first number was published in the summer of 1865. Colonel Bruce requested me to assist in correspondence, and in addition to that, the first volume of "Horse Portraiture" was published in it, and subsequently the future portion of that was intended for a second volume.

In 1868 I became a joint owner of the paper with Colonel Bruce, and in some two years after, I became associated with D. A. Gage of Chicago in his horse ventures, I transferred my interest back to Colonel Bruce. Busy as I was with the large number of horses at Atwood Park, near Chicago, I wrote for the "Turf, Field, and Farm," the New York "Herald," and other papers.

Since my arrival in California in 1874, my journalistic work has been continued. A third of a century, therefore, I have been connected with the literature, and, in fact, for that length of time my whole attention

has been given to some pursuit connected with fast horses. That the work which was given the greatest publicity, viz., pen portraiture, created the impression that the more practical part, i. e., breeding, and training, was a sort of occasional interlude, and that success I have had the fortune to meet with was a stroke of luck, and not my later ventures; whereas, had it been otherwise than that anticipation in handling horses preceded journalistic work, in ability that would never have been undertaken. Ten years after joining the ranks I wrote the introduction to "Horse Portraiture" as that will give an idea of what it was imagined a decade of experience had taught, it is copied. But the confidence I felt then has been completely upset by subsequent trials—more particularly by those studied in California; and in lieu of recommending the "system exemplified" in "Horse Portraiture," I have made such radical alterations therefrom that some of the most important phases have been abandoned, and, in my opinion, better usages followed. At the foot-tubs, mashes, regulation sweats, in short, the methods which I still thought to be orthodox by a majority of trainers, and the differences between my present methods and what were pursued in my residence in California, ascribed to ignorance, lack of knowledge, a course which I had followed for nearly twenty years. That the fairly successful during that time will be shown by the brief history given of the period during which orthodoxy prevailed, though not the least doubt that under the present heterodox beliefs, the same material, better results would have been obtained.

INTRODUCTION.

I present this, the pioneer work of its class, to the public, with both trepidation and confidence. Aware of the many faults in construction, style, and the manner in which the ideas are conveyed, I claim the leniency of my readers, and can only plead, that as no writer more scientific, polished, and practiced had attempted to write on this subject, the errors of a novice in literature would be overlooked and excused, that with severe criticism in a veteran author. This book has been written in the evening between the morning's drive and the evening's walk; and when the winter put an end to active training, the labor of composition and the care about equally divided the time.

The practice recommended to be followed in these pages, in order that a horse may acquire condition and learn to trot fast, I offer with confidence. The treatment is no pet theory, but the result of years of practice, when the effects of any change of work was anxiously watched for and carefully noticed. The system, as here given, I have found the best that has come under my observation, and I do not hesitate to put my name as a *horseman* on the award of those who will give it a faithful trial.

The chapters on sweating, food, and drink, are not offered as being scientific, but as a direct in a veterinary view. The want of medical education would have prevented writing such a treatise, if I had been ambitious to do so; but the results deduced from the practical tests of every season's experience in training horses, would lead to the same conclusions.

Should this effort meet with the favor and support of the public, I will be enabled to follow the plan I have sketched, and continue the history of the trial of a horse, from his journey from New York westwardly, through the main places to the Mississippi, that stream to New Orleans, describing the management when on the steamboat, in the way car, with the care necessary to keep the horses in condition while traveling, and frequently trotting in races, accompanied with descriptions of scenery, course, and incidents illustrating turf sports.

The reasons why I have broached subjects other than breeding and training, are the same that would induce a person not to work a favorite colt entirely on the track, but to give him at intervals to jog through shady lanes, where the hawthorne would be in blossom, and the white blossoms on his glossy coat, and by the seashore or the river bank, where the gentle breeze would moisten the hoofs parched on the dry, hard ground, and return with new life, and knock off a few seconds from the time it had taken him to accomplish a mile. And so the writer felt refreshed after wandering from the dry details of training, in better spirits and with a keener zest, to the knowledge he possessed to those who join with him in enthusiastic admiration of a fine horse and a fast trotter."

presenting that part of the chapter which gives a description and a history of Blackbird, as stated before, I would say there is a great deal of his blood in California, through his sons, Reavis' Blackbird, A. W. Richmond. Among the most noted California-bred descendants are Anteeo (2:16½), Vic H (2:18), Antevolo (2:19½), Romero (2:19½), Richmond, Jr. (2:21½), Alfred G (2:19½), Redwood (2:21½), Anteeo (three-year old, 2:23½), Faustina (two-year old, 2:24½), Coral (three-year old, 2:25), Ned Forrest (2:25½), Clara Z (2:26½), and the Arrow (2:13½) and Ellwood (2:17½). That the future will add to the many I have not the least doubt, and that the descendants of "Blackbird" will rank high among the brilliant array of California-bred horses, are assured facts. The *personæ* of the book copied from, were those that I had owned and one belonging to a friend, though with pseudonyms: Blackbird, "Falcon," Nabocklish, "Never Mind," Clifton, "The Clipper," etc.

Here we are back to the stable. One of my rules is never to smoke in the stable, nor suffer any one employed there to do so. Visitors, of course, have to be tolerant of the bad practice. Boy, bring out the Falcon.

Boy—All right, boy; give him his head; I want to look at him from a distance. Turn him partly around. Now run alongside of him across the yard; come a little faster as you approach me; that will do. Well, scholar, I told you that some time I would give you my idea of a model roadster, and there stands nearer my ideal than any yet seen. Before going into detail of his form I will engage to make a trotter of no matter how much he has been abused in his training. I make this promise not from the fine action he exhibited while trotting across the yard, but from that clear head, ear, and eye, that all show sense. Horses have just as many degrees of sense as men, and Daniel Webster's "Dome of Thought" never more palpably showed superiority over the majority of mankind than does this horse over his compeers. His head is large, yet you would not find enough meat on it to furnish a pet kitten with supper. Look how the clearly cut nostril is just extended enough to discern the edge of the pink lining. There is an India rubber look about it that shows the orifice can be widened so as to admit all the air necessary to feed the lungs. The jaw appears as if it were widening till you can thrust your clenched hand easily between the sharp jaw and the throat. There is a corresponding widening of the forehead, giving plenty of room for a brain, not alone the source of wisdom in a horse, but the center of the nerve force, wonderful something which we cannot explain, but which as surely enables the horse to do "great deeds of great renown," and places him far above his kind, as it supplies the stimulus that renders him immortal.

The clear, hazel eye, lustrous as a gem, shows his sagacity; and the long, thin ears, set just as I would have them, are perfection. How daintily the head is set on the neck; you could span the neck if it were detached from the throat, which so nearly fills the space between the jaws. Were it not that the neck is so perfectly formed it would appear too long, but the crest rises so beautifully that it requires the length to give such a graceful curve, while the depth it displays, where joined to the body, shows the power of strength and lightness, admirable in its just proportions. The breast has the formation usually seen in the first class racehorse. The shoulder blade rises well above the top of the wither, is broad, sloping, and falls back into the sway just as it ought to be at the point of it is well thrown forward so that the humerus, or upper bone of the forelimb, is oblique. The elbow is properly placed, neither tied in nor standing away from the body; this is what brings the fore legs so truly under him. As you stand in front of him, they are as true as a line, slightly converging to bring the feet squarely under the body, and the toes straight. The arm is long, the knee broad and strong, with the bony formation behind well developed. The canon is short, the ligaments large, which gives the flatness so much sought after. The fetlock joint is round, as if turned in a circle, while the pastern is long, springy, and oblique, so as to take the jar off the delicate bones below, without dropping enough to show any signs of weakness. There is no evidence of ringbones or navicular disease in that formation. The feet are of a fair size, with good heels, and horn that will never shell if the nail is placed properly. There is a deal of truth in the old adage of "no foot, no horse;" these are not only naturally good, but I must congratulate you on having kept them so by judicious care.

The horse is very deep through the heart. When I first saw him I should not have thought him to be over fifteen hands two inches at the outside. When you stand beside him you are satisfied that sixteen hands is, if anything, below his measurement. The neck swells out, giving a good length of ribs, which are wide and have the right curvature. The back and loin are remarkably strong. The arch in the back is so high that it does not look as well as if a little lower, but there is a mountain of strength there when viewed with the broad loin, braced with fillets as thick as your arm. The hip is long, sloping enough; were it more level it would give him a jauntier air, but he would not

be as likely to trot so well. The stifles are low, and placed the requisite distance play freely, without being interfered with by the abdomen. The hock is clean that you can trace the articulation of the joint. The great width of the arises from the bone, forming the part of the hock or os calcis, being so long as don comes up a long way before it is covered by the muscles. What was the canon of the fore leg will be appropriate to describe the hind, only the flatness is apparent. The angles, from the hip to the foot, are just what they ought to be the propelling hind legs to the best advantage. His muscularity is just what long, lean, and dry; they will come as near giving you an idea of perpetual in the power of any animal to display. If he was only a little fuller in the believe I would like him a very little better, but as they are heavy enough, and would give him a cloddy appearance, that would take away from his high coat is another mark of his high breeding; that and his hoofs would convince a discriminating observer that his claim to blood was well founded. He is not pure but dark brown, with tan-colored flank and muzzle; this I prefer to a horse black.

His tail is magnificent, "fit for a Pasha's standard," as Willis once remarked of Suffolk's, but fitter to ornament such an animal as we are looking at. Some of him too short in the body, but I think, if measured, you will find it equal to the best proportion, in my opinion, to unite speed, bottom, and that compactness so essential in a procreating animal, more especially the male parent.

I have, in this cursory manner, run over the Falcon's chief points. Many would differ with me as to what conjunction of them forms the best horse. My experience has led me to think a horse for fast driving on the road and track—going, up hill and down, or repeat his heats all day—must approximate the one just sketched.

PUPIL—You cannot conceive the pleasure you have given me, listening to the words you have passed on the animal that I love. Yes, love is none too strong to express my feelings for that horse. After family and friends, he has the nearest my affections; and in order that you may understand how they became so strong, I have to acquaint you with part of our—at least to ourselves—eventful history.

His place of nativity was central Ohio, a fine undulating country, which in age nearly equals the blue-grass region of Kentucky. His parentage is uncertain; his sire being Camden, by Shark, his dam a daughter of the northern champion boy, thought, until his defeat by John Bascombe, to be the best horse of his age. He grew up a fine colt, taking the premiums at the local fairs, until three years old, when he was taken West by a boy who had no more knowledge of condition than if he had seen a horse. He ran him all sorts of races, from a quarter dash to two-mile heats.

As a specimen of the usage he got, I will relate the following story, which I was strictly true. The boy having got in debt, an attachment was served on him. He was locked up by the Sheriff in a log stable, where he was confined for a week. There were some races at a little town not very far off, and his owner managed the day before the two-mile-heat race was to be run. He traveled him to the head of the race course, tying him to a tree; during the night a violent storm gave him a thorough wetting. He had no rider, and in order to come as near a conventional scale as possible, rode him himself without a saddle; still he had to be dressed and thirty pounds—a pretty severe weight for a four-year-old, that had been a strict prisoner for weeks. He made a very good race, and it was the opinion of most who saw it, that had he been judiciously ridden, he would have been as it was. That fall I saw him on the occidental side of the Father of Waters as much struck with him at first sight as you, thinking him the best form I ever saw. I had long been of the opinion that just such a thoroughbred was what we needed to make a number one trotter; but he had changed owners, and I did not succeed in getting him till the spring of another year. At that time I was engaged in land selecting Government lands in Iowa and Missouri, and being successful in my locations, that I could sell readily at a greatly advanced price, my fancy for only indulged as a pleasant interlude to the excitement of the land gambling. I bought him I placed him in the hands of a trainer who was reported to be that part of the country. It was no trouble to break him to harness. On the day he went around the track hitched to a sulky on a trot that was as easy as a swallow. There was not much bending of the knee, and his action was so different from the spluttering little Black Hawks and Morgans—then all the rage in that country—that the lookers-on ridiculed the idea of his ever making a fast trot. I did not see him for several months, having been on an extended tour "land hunting." He trotted at a State Fair in 3:05, which was certainly as fast, for the time being, as I expected in my most sanguine moments, but no one else thought him fast.

In the winter he ran in a loose box. When spring time came, and the weather got dry and smooth, I commenced driving him on them. He completed the season away, in a double sense. I thought I had owned and driven road horses as good as could be found, but I discovered he was so much superior to the rest that I took no pleasure in driving any other. Seventy miles a day was play to him; he literally required no driving; a word would restrain him when most needed. He never saw anything to shy at, but went along as straight as a line. His form was so manifold, that were I to recapitulate them, it would be tedious. I again let his former trainer have him. The first time he went on the track

two miles in six minutes. The same day I matched him against a Black Hawk for a couple of thousands, p. p. The match made a great deal of talk and excitement in the country, and my man was so anxious to have him trot fast all at once, he ventured to whip him to increase his speed. This treatment his high spirit did not brook, and then began the contest between them, but the biped's arms was no match for the quadruped's strength of jaw, and when the day of the trot came he was unable to hold him.

I did not see him from the day the race was made till the one prior to it. It was too late then, even to suggest anything, so he was driven in a long-shanked curb-bit that was purchase enough to break the jaw of a mule. He was easily beaten. I cared not a penny for the money I lost, but it was bitter to hear the remarks: "I told you it wasn't worth trying to make a trotter of a racehorse; they ain't fit for nothing only to put a boy on their backs and run over a smooth path," with hundreds still more ill-revered. I sent him home and housed him again in his roomy box. Before the frost set in I started with him for Chicago. He was just as pleasant as ever, and I greatly enjoyed driving him the trip. Again I was unlucky in putting him in the hands of a man who did not understand the nervous organization of the descendant of a long line of illustrious ancestry. He hit him sharply with the whip when driving him down the shore that follows the shore of the beautiful lake, which the Falcon resented by running. The bit and reins were of no avail to stop him, but on he sped. The prairie was passed and the driver thought of throwing himself out of the skeleton wagon as he rushed through the timber. At last, from sheer exhaustion, he was forced to give up the pull, when a few soothing words were sufficient to stop him. The fright, however, did not prevent the man from getting behind the horse again, and the only exercise he got was the son of the trainer riding him behind the wagon when his father was driving. I sent him home, thinking it was written in the book of fate that the prophecies of those who were always ready with their "I told you so" were to be fulfilled. That season great panic overwhelmed the West, leaving thousands, who had thought themselves off, entirely penniless. It did not take long for me to realize that I was in that poor destitute condition, for after selling every farm and acre of land I possessed, I was \$5,000 behind hand. The house where I lived, and which cost me nearly \$10,000, was taken by my creditors as a great favor to me at \$2,000. I built a "shanty" on a piece of land belonging to a friend of mine, moving thereon my family, this horse, and my colts. The land was entirely unimproved, but was beautifully situated, and so that very little expense built a good training track. To attempt training horses with the little knowledge I had of it, was, to say the least, rather presumptuous; but I had nothing else to do, and if my favorite ever made a mark on the trotting turf, this was his only chance for even a poor education in that useful branch of equine accomplishments. He kept me in good cheer by improving so rapidly under my teachings, that those who had denied his having the least chance to make a fast one, now acknowledged the possibility of his becoming such.

I trotted him a ten-mile race, which he won easily. The stake money he had earned in services in the stud before he left home, so I was double his debtor. The following week he had more business than he could do from March until September; still, after a few weeks' preparation, I trotted him a race of heats of five miles. The first he lost by a length, in 14:21, and lost it entirely from bad driving on my part, for, in place of letting him go as he wanted, I pulled him back, which irritated him so that he worked up the whole of the heat. The second he won, in 14:33; and the third his antagonist gave out, dead beat, on the thirteenth mile; but the slowest he could be made to go that mile was 3:20, making the heat in 15:11. At the conclusion of the race it was a difficult job for two men to hold him till he was unharnessed from the sulky, not the distress, or even leg weariness being perceivable. The next day I started home with him, he bowed along the smooth road in such high spirits that it appeared as if he was at the victory he had won, and was determined that no one should think he had won but an easy task, by hiding the soreness he certainly must feel.

After having seen him exhibit any signs of fatigue, I thought I would give him a trial, for this purpose kept him to work a couple of weeks longer. I then drove him fifteen miles in 44:05, and on pulling him up not a leg trembled, or even a long inspiration given the least distress. I then concluded to trot him twenty miles in an hour, and I am positive would be an easy task for him to perform, but have now changed my mind, and hope to see him doing his mile low down in the twenties, which I fondly think capable of, from the bursts of speed he has often surprised me with. I shall ask as my greatest favor you can do me, that in lieu of telling me how to drive, you will chaperon yourself. I know he will please you when once acquainted. As you remarked about magnetic fluid traveling from driver to horse, this fellow shows it more than any I ever with. If I got into the wagon ill-natured he was sure to be cross too. At other times, on a fine morning like this, on arriving at the top of the hill, he would stop without any admonition from me. I know he enjoys beautiful scenery as well as I do. I know him to stop on a bluff overlooking the Mississippi—his eye would follow the course of the river for awhile, but would finally rest where the water, prairie, and timber made a harmonious picture that would have delighted an artist. There was no mistake in the look, or the nod of satisfaction he invariably gave as he sprang off in the brisk trot to make amends for the lost time. I told you that next to family and friends I loved him more than anything else. It may be foolish, weak, and wicked, thus to speak of an animal, rating him above, and holding a place in my affections before many created images of the Great Architect; yet when I recount what he has done for me, you,

at least, will understand the feelings that prompt me. From a load of debt have bound me as a three-fold cord in duration, that the results of even success would have been unable for a long series of years to lighten, he has freed me from the sweet-scented cherry and flowering, fragrant crab tree; where the sun brightly in the windows of a morning and gilds with refulgent glory the open in the evening; where the placid river runs so silently to the sea, with woods in its bosom that look like floating fairy gardens; where colts are gamboling in fields; where peace, contentment, and happiness dwell—for all this I am indebted. Would it add to his happiness never to have a saddle or harness on his back, never wear the bonds of servitude again; but active life is what he enjoys. How large a box you confine him in, he frets like the prisoner of Chillon, and wear even a stone floor in his uneasiness. He must acquire more than a long and leave his posterity a record that will compare with the best, so that others his great excellence as well as myself. This is what I have marked for him in this I have studied, and for this I have come to perfect myself in the art, and are conceded a master.

As a further explanation it will be proper to state that Chas. was written in 1863, after the death of Blackbird, and he was place in the "trial stable" to illustrate the right management of a high-tempered, resolute horse. It may also be well to state that all the trotters I have known, not one was the peer of Blackbird, all the qualities and chances are taken into consideration. His race was so remarkable that "work" which would have done horses of ordinary "bottom" was play for him, and his toughness and exercise; up to fifteen miles in 44:05, was taken without any token of distress. That I gave him altogether too much fast trotting is beyond question. Following the old plan of racehorses for heats of two miles and upwards, and with the he could not be controlled without long drives, heavy sweating clothes, etc., that was done. Sixteen quarts of mixed feed per day (parts oats and one of hominy), and work in proportion. I have a better understanding, and, after returning from a fall in 1861, I reduced his exercise and feed, gave short brushes, and return he improved marvelously. He trotted a quarter to a skeleton wagon in thirty-four seconds, and this was so much I had witnessed, up to that time, that I was elated to a high than to own a "two-minute trotter" would now give the key. He been wintered by running in a paddock of about half an acre, large box adjoining, the door of which was left open during the weather was favorable. He liked to roll in the snow, and way he sprained his stifle joint so badly that for days he could not that leg. He was lame all the next summer, towards the latter which he had recovered so as to be jogged.

For the first time since I became his owner he carried a good flesh—one hundred and twenty-five pounds heavier than in years—and that fall he died from a severe attack of colic. He foaled May 17, 1851, he was comparatively a young horse, and I attributed to mistaken kindness on the part of the man who of him. He had an attack before, with chills and fever, broken up by quinine. The man was cautioned not to feed corn, but cobs in his feed-box told that he had not obeyed. His explanation was that when he fed the other horses, "Blackbird" noded so coaxingly, that he threw him a few ears, and he had so well when taking his walk in the afternoon, that he thought entirely recovered.

A warm friend of mine, John S. Wolf, a railroad conductor

a brown horse, by Vermont Black Hawk, called Tom Hyer. He Green's Bashaw were the champion trotters of Iowa. Bashaw had him at Iowa City and Davenport, at the fairs in 1862, and the day after Blackbird's death Mr. Wolf solicited me to take him. My friend had a horse named Rising Sun, and he also requested me to take him. As this horse gained quite a celebrity under the title Nabocklish, the rechristening may need explanation. The year before at a bay gelding from an Irishman, which made the fastest mile for a green horse" ever made on my track. Being an admirer of the Irish horse Nabocklish, the sire of the dam of the great Harkaway, he was named. The box he had occupied had his name over the door, when Rising Sun came he was put in it. That was accepted as an in that a change of his name would be fortunate. He had a record of 2:54, but I was satisfied, from a race he trotted in Dixon, that he could go a good deal better. This was a correct supposition, as he won sixteen races for me before losing one, and obtained a record of 2:28. The year 1863 was quite a fortunate one for me, though the loss of Blackbird was more acutely felt than all the good fortune could make up. My "stable" consisted of Tom Hyer, Nabocklish, and Mayday. My campaign commencing at Lyons, Iowa, then to Chicago, several of Iowa and Illinois fairs taken in, and then to St. Louis, winning at every place. Nabocklish beat Jersey Boy at Chicago, Scalpel at Davenport, and I landed quite a "pot o' money" when he beat Jim Rowell at Decatur, Illinois. Jim won the first heat, and the St. Louis folks thought him nearly invincible. When he lost the second, his owner, Creveling, drove away from the track. Tom Hyer won several races, and at St. Louis he added two victories, the first of which returned several thousand dollars outside of the purse. But the greatest glory gained by defeating Bashaw at Davenport. Owing to the homecoming between the two recognized fastest trotting stallions, the Scott County Agricultural Society gave one purse free for all stallions and a special purse for Young Bashaw and Tom Hyer. Bashaw was distanced in the first race and his owner, following the advice of his driver, refused to start him in the second. When in Chicago I assisted the club in managing the meeting, and, by the way, sold the first pool ever sold in Chicago.

The next season I was employed by the association as Secretary and General Manager. I made them two propositions: one, that the salary should be \$300 per month; the other \$125 per month, with a half interest in the gross receipts of the percentage on pool sales, with the proviso in either case that I should train my horses. The second was chosen, when I rendered my account at the close of the season the Directors were astonished to learn that there were credits of nearly \$20,000 from my source. "Money was plenty," at least that which represented the pool sales at the Tremont House the night before the one in which Harry Clay beat Quaker Boy and Princess amounted to \$100,000.

Our papers are now claiming that trotting stakes are a late innovation and ascribe to that the wonderful advance the sport has made. The first meeting given by the Chicago Driving Park Association, in 1864, was entirely stakes, that which Harry Clay won being \$500 each, forfeit, with \$500 added, and amounted to \$2,250. There were no stakes, and those who made nominations in them from a distance

were somewhat surprised by the return of the 10 per cent which had been sent to pay entrance on the added money.

That same season the first running meeting for about twenty years was held, and I made a journey to Kentucky, and attended the St. Louis in order to obtain the coöperation of owners. In company with a friend I bought a colt and a filly of John Harper, employed as a celebrated rider John Ford to train them. It was at that time in St. Louis, when Theodore Winters bought Norfolk, and I asked Mr. Alexander if it was really his intention to add one dollar to the price or lose the sale. He answered that it was, and the reason given was that William J. Minor had written that when Mr. Alexander sold \$15,000 for Lexington it was a very large price for a "blind horse" with a flaw in his pedigree," and that his object was to sell one of the best of the ton's colts for more money than he paid for the sire.

That racing meeting may be called the initiatory of the movement which has resulted in Washington Park Club, for though I was not the only one connected with the association who favored it, it was the general satisfaction with the sport, members and "general public" were pleased. Idlewild met with one of her few defeats there, the victory was a prise, being a son of Bonnie Scotland and Young Fashion, the winner of Hock Hocking and Three Cheers.

But in order to bring this communication within bounds, the period from 1864 to 1874 must be summarized. The only season that I was not actively engaged in training and track management was the winter of 1868, which was passed in New York. I exchanged the farm for Bonnie Scotland, sold a half interest in him to D. A. Gage, and my family East, expecting to "locate" in the vicinity of New York. The folks pined after the prairies and the friends among whom I had passed the greater part of their lives, and I must acknowledge that the eastern people and western life were more to my fancy. Much as I loved the metropolis of the country to interest as well as amuse, I found it a place to visit, glorious to spend days, or weeks, or even months. There was a longing to be nearer "sundown," and even now, when looking up to the upper story of the tank house, the setting sun is seen glowing into the golden tinted Pacific, there are occasions when the temptation is strong to take a trip where it would be seen emerging from the western water-marked horizon. Only for a trip, however, as California sends attractions which are without parallel in my estimation, I say the folks.

The balance of the winter 1868-69 was spent in Chicago, however, at the Transit House, which had the advantage of being only a short distance from the entrance gate of the track. Happily enough, I passed, the children were at a first rate school, but after the season the meeting came to an end in July, and owners of racehorses and trainers were leaving for other fields, there was a stubborn attack of homesickness, the want of a home of our own, after the trade for Bonnie Scotland was being fully realized until then. An offer to the owner was accepted, and in a short time we were again on the way to Iowa. The grand old dam Rio Rey, and others of that noted family, and the dam of Antelope, hauled the carriage containing the family. The granddam of Antelope and Antevolo, the dam of Reber, and other good racehorses, the Papermaker, Malcolm, Burnbraes, and other thoroughbreds, and a few other trotters, were in the cavalcade. A pleasant

big lake to the Father of Waters and a pleasant winter on the old camping ground.

The following spring I entered into an arrangement with D. A. Gage, first being a purchase of fifty-seven horses of him and rental of his racing farm, Atwood Place; afterwards a partial partnership—some of the stock were owned conjointly, others individually; the thoroughbreds were mine, excepting two in partnership, and I also owned several others. Mr. Gage owned Logan, Princess, Clara G, Ida May, and some others personally.

As far as the horse business was concerned, the partnership proved profitable. Successful with many, the great *coup*, however, being made by Clara G. When I went to Atwood Place she was not rated very highly, and Mr. Gage offered me a half interest in her and Ida May for a comparatively small amount. She would not trot in 2:50 in harness, though showing a good deal more speed under saddle. It would be far beyond the scope of this communication to describe the methods used to overcome her propensities in all manner of gaits and annoying habits. In the first season there was decided improvement; the second, 1871, I bought her, in company with Ida May and India Rubber, to Buffalo, and before the Chicago horse sharps thought little of her chances in the season she was entered in. I went to Buffalo two weeks previous to the meeting, in order to give the horses a better chance, and James L. Eoff, who attended the meeting, was the first to discover that she had some chance to win. Her first race was in the three-minute class. There were ten starters, among them Huntress, Thomas L. Young, Kilburn, etc. I won the first heat in 2:30. One of the Directors informed me that the "Erie party" had taken a great fancy to the mare, and as Mr. Gage had authorized me to sell her, I told him that I would trot the last half of the heats pretty well up to her speed; but as I had promised Mr. C. J. Hamlin to show him three heats without a break, though she was "quite handy," should keep her within her rate. The second and third were trotted in 2:26½ and 2:26, the last half of each in 1:10. I do not think that I ever witnessed more excitement in a trotting race. She was a very handsome mare, and the ladies applauded as heartily as the men. This was by far the fastest "three-minute race" up to the time, and stood at the head for many years thereafter.

Before I left home Mr. Gage thought that \$12,000 would be a big price for her, and gave me liberty to sell her for that, or something less. He did not intend to come to Buffalo, but I urged him so strongly—that she was showing better than she did at home—that he came the morning of the day the race was to be trotted. Mr. Pickering Clark, to whom I sold a filly, came to me just before the races of the second day to commence, and with the preliminary remark that his method of purchasing was what I had seen—an offer, and either acceptance or refusal, he said more words—that if my answers were satisfactory, he would make an offer for Clara G. The replies given, and he said \$20,000. I told him that, while authorized to sell, inasmuch as her owner was there, he should be consulted. At that time Mr. Gage was a member of the Board of Appeals, which had the entry to the Judges' stand, and as the signal had been given warning, I knew where to look for him. He was acquainted with Mr. Clark, therefore no necessity for an introduction; when I acquainted him with the very liberal price offered, he turned

quickly on his heel, remarking, somewhat curtly: "Thirty will not buy her." He, too, had become excited over his mare.

Mr. Clark laughed, and when I apologized for the abruptness of the most genial men I ever knew, he answered: "I am surprised; Mr. Gage is a very wealthy man, and that mare, named after his only daughter, is the finest looking fast trotter I saw."

One of the episodes of that race was not so pleasant. In the summer, when it was rumored that Clara G was doing well, Graves "bantered" Mr. Gage for a race, he naming Clementine Clara G, for \$5,000 a side. I told Mr. Gage that I felt confident of beating Clementine easily, but as big matches were likely to cause bad feeling among neighbors, and that I did not want to show the race at Buffalo, which I also felt confident of winning, and in case we could win more than \$5,000 with comparatively little effort, I assented to this plan, and a friend was selected to buy the pool. Mr. Gage gave him drafts for a large amount of money, and, in case he might act with some skill, I cautioned him against being too sure. I told him that I had seen Ed. Eaton trot half a mile in 1:08, and many of those entered were unquestionably fast.

I did not stay long at the pool-room the night previous to the race, and when our commissioner came to the track and showed me the pool, I was thunderstruck. A few on Clara G, a huge bundle on Ed. Eaton, quite a "pack" on Ed. Eaton, Barney, and Kilburn Jim. "What a world have you been doing, Ben?" was my first break, and it was a lower world that was named, and if not so fit for ears, it gave a more emphatic flavor to my condemnation. "Why," he asked, "after I saw you and went around among my old acquaintances, I was sure that you could not win. Mr. Goldsmith told me that Hunt trotted a mile in 2:22. The fastest Clara G has made at home I have seen, was 2:28; you, yourself, told me that Ed. Eaton trotted half in 1:08; your fastest, when I held the watch, was 1:12. The New Orleans boys say that Barney is a great stayer, and his mare, good judges claim, is liable to be soft, and even Ira Holman to bet me \$500 that his black mare would beat you. You can't win your best, and I was bound to win some money for Dave."

There was some other talk rather more forcible than that, and when Mr. Gage came, I laid the situation before him. He said and said that he would instruct Ben to buy the rest of the pool. That was too friendly, I answered, as it would require a great deal to save his money that was now in. I sent one of the boys after Mr. Gage in the presence of Mr. Gage gave strict orders that Clara G should be bought, but endeavor to get the tickets at as favorable a rate as possible. I hastily ran over his statement, after warming the pool, and when I saw how many thousands of dollars were "in the pool" of it Mr. Gage's cash, I must acknowledge a degree of nervousness I had felt in a man before. Between twenty and thirty thousand dollars' winnings were eighteen hundred.

While in Buffalo I received the programme of the Kalamazoo race. In that were two purses for racehorses of \$1,000 each, heats of three in five, and heats of two miles. In 1869 I had fair success in the racing division; in 1870 a trainer was employed, and the

continued run of bad luck all through. My time was absorbed with the trotters, for though Mr. Gage was a joint owner in two of the racehorses, he took little if any interest in racing. Two of the mares, Columbia and Minerva, were broken to harness, and even old Malcolm was subjected to the indignity of being driven a few times to a sulky. There were four Bonnie Scotland colts, two four-year olds and two two-year olds, three of them broken to drive; well bred colts, two being from Maggie Mitchell, the dam of Marion, one from Magenta, the dam of the mare of Magenta, and the other from a Knight of St. George mare, and one from Bellamira. And, by the way, the last named could beat any of the trotting bred colts of the same age handily, but as he was also a galloper, the intention was to run him in his three and four-year form, and then complete his trotting education; but this scheme went all aglee," as he died the following winter. I entered the two-year olds, Burnbraes and Blinkiron (the Magenta colt), in the Kalamazoo purses, and telegraphed Billy Johnson, who was ordering their tickets, to give them a two-mile trial, and bring the winner of it to Kalamazoo. Blinkiron was the victor, and Billy was on hand when the Buffalo contingent reached the course, noted as being the first which had a trotting record in the teens made on it.

Blinkiron had shown rather poorly the previous year, so much so that I obtained him at what I considered a great bargain, viz.: in exchange for a Childe Harold mare. There was some "management" to induce the managers to set the two-mile-heat race for the first day, Tuesday, and the three-in-five for Thursday. Notwithstanding this somewhat sharp practice Blinkiron won both in straight heats, there being six starters in the first and five in the second. So far 1871 had been a favorable season. There was rather more judgment in the pool than was exhibited in the Clara G race. Billy came fully impressed with the notion that he had a good colt, and as Regent was his favorite in the first race and Boaster in the second, the money was "on" to good advantage.

The winter was drawing near and the horses let up preparatory to going into winter quarters. October in all its yellow glory had gotten fully under way in its thirty-day race. Saturday, the first one of the month, I spent the night in Chicago; a lurid night. Fire swept over several blocks in a busy part of the town. Sunday night I was awakened by a bright light shining into my bed-room. The big barn must be on fire. That was not the cause. Further east the sky was aglow, and it was the reflected luridity which illuminated. Evidently the "City on the Lake" was doomed. Our place was on "The Ridge," the highest land in the suburbs, nothing to obstruct the view; the flames shot from the reddened horizon far into the upper space. The roar could be heard, accompanied with a sibilant wail. The sun, a huge orb looming portentously through the veil of fire and smoke. It seemed as though the air was superheated, and that the action of the dried prairie grasses, as stem and blades swayed in the wind, would end in ignition. There had been prairie fires near us and there were exposures on every side. Serpents of fire twisting and darting not far away, and at such an elevation that a change of wind might carry them into fields or paddocks.

Not one could be spared from the home guard, and although a pair of horses had been attached to a vehicle from early dawn, and now it

was noonday, they still stood in readiness. Two daughters were at the Sisters' school, but that was on Wabash Avenue, south of Adams, and the fire was certainly far north of that. Their mother and sister were on a visit to Iowa, and when a lady from Riverside adjoining town, came with the intelligence that the whole town was threatened, there were no more thoughts of guarding home. Billy was in the light wagon as I caught the reins. The bang of the boulevard gave back the clang of the steel-shod hoofs. At the start it was a fast trot, a flying gallop when the straightaway was before us. Nearing the city, the streets were crowded with people fleeing to the open country, maimed, woe-begone, broken-hearted, begrimed with soot and ashes, many of them bareheaded, old women, and children, intense fear and consuming sorrow pictured on their countenances.

Across Twelfth-Street bridge there was no chance to get out of the streaming mass all going westward, and the pace was so slow that minutes seemed hours. North on Wabash Avenue, ere we were in the blocks of where the convent stood, the way was blocked by the vehicles met, with loads of goods snatched from the burning. Taking the reins to Billy, I dashed along street and sidewalk, between trucks and drays, through openings and over piles of lumber thrown from the houses.

Not yet near the seminary, and there was a barrier of fire. I tried to attempt further progress, and then it was easier to account for the looks of anguish on so many faces. Not long, however, that the anxiety had the mastery.

"You need not be alarmed, Mr. S——, the Sisters took all the girls to their hospital long before the fire reached the school, and the daughters told me that they would go to the Transit House, where they will find them well and not a bit flustered."

It was a real friend who had kept watch while the flames rose and the fire king held sway. He had gone to the convent as soon as it was apparent that it was in danger, to look after the children, and to relieve my anxiety. He was also a warm friend to Mr. Gage. There were tears moistening his eyeballs when he said, "I saw Dave is gone. The last that was seen of him, he rushed back to the Sherman House to secure valuable papers just a little while before the roof fell in." There was a feeling of guiltiness over the elation of the first good news, while the fate of so many tried friends was unknown.

There was some difficulty in finding Billy and the horses amid the turmoil in the streets, but on driving to George W. Gage's, still south on the avenue, his brother David was reported safe. At the Transit House, the children entirely recovered from the excitement and fright of the removal, back to Riverside, from whence telegrams were sent to the folks in Iowa, and then another drive to what was then the city. The supposition was that every representative dollar in the shape of legal tender held by the banks and in other depositories had succumbed to the heat, which had turned the rails of the tracks into curves, and crumbled large granite blocks into powder.

Something had to be done with the horses, and the plan was to take them to Mr. Gage was to sell what we could, in order to get means for the others through.

What can you sell?" was his first query.

Clara G, to Mr. Bonner," I replied, "and probably some of the others, to be sure I will first go to New York."

It took scratching to raise even the small amount for expenses. Safes were too hot to open, though the most sanguine thought that the paper they must be destroyed.

I acquainted Mr. Bonner with the situation, and his answer was: "I should have been pleased to get Clara G when the whole country was talking about her, but it is different now."

"But," I replied, "she improved greatly in speed after her return from Buffalo, and I can set people to talking again should the weather become favorable to restore condition. Before going to Buffalo her fastest mile on our track was 1:11½; since her return she has trotted that distance in 1:08, and a quarter in thirty-two and three quarters seconds."

"What will you take for her, and show a half in New York in that time?" was his query.

The same as Mr. Gage was offered—\$20,000."

"I will give it," was the immediate response.

But, Mr. Bonner, as I told you, we are all 'dead broke;' money in the bank, and I must sell you something unconditionally to provide for the expenses of the trip."

"What have you got that will be likely to suit me?"

"Old Princess."

"Is she in foal?"

"I cannot say; turned her out with a two-year old, but she has missed two seasons."

"How much?"

"One thousand dollars."

"I will take her. What else?"

"The dam of Clara G. She is in foal to A. W. Richmond."

"How much?"

"One thousand dollars."

"I will take her."

This was all the bargaining, and exemplifies Mr. Bonner's methods of purchasing horses. The trip was made, but the "let up" had put the dam "all off," and then, too, she did not like the heavy grades on the Woodward track. I could drive her faster up from the half to the stand, where there was a rise of over twenty feet, than from the stand to the top. Then it struck me that the public sale I intended to hold the following June would be greatly injured by selling those which would not attract purchasers; and then again, contrary to expectations, the money was not all burned, so that I brought all home again save the two sold to Mr. Bonner.

The June sale was better than was anticipated. Clara G brought \$10,000; John H, \$7,500; several others between \$2,000 and \$3,000; the youngsters ranged from \$300 to \$800.

I closed the partnership. I bought of Mr. Gage between two and three acres on "The Ridge" for \$2,500 per acre, built a house which cost about \$5,000, and a training stable which cost nearly as much. It was on an entirely new plan. The main building had six sides, with a square projection towards the street, the lower part of which was harness-rooms, floor to "hitch up" on, etc. The upper story, dormitories for the men employed. There was a large court in the center of

the main building, around that boxes, and between the boxes side wall a circular corridor wide enough to lead one horse by of another, and of a circuit that gave a chance to trot slow walk. The second story, that above boxes and exercising ample room for storage. The court was carried up another lighted from a cupola. Altogether the most convenient for purposes I ever saw. And it will be proper in this connection that previous to the sale, June, 1872, I built a miniature track. Gage took a great fancy to exercising the colts upon it. Showing in that, before and during the sale, without doubt added at least cent to the prices they brought.

And now I will give a short sketch of the events which came in my coming to California. I had from the time I was eighteen old possessed an ardent desire to see the Pacific Coast. In 1843 I had a book which gave such glowing descriptions of Mexico and California that I endeavored to get passage on a sailing vessel which traded to that far-off country. From New York I was sent to Providence, Bedford, and the wise counsels of a friend, a printer in Providence all that stopped me from shipping on a whaler destined for the Pacific, the Captain promising to land me on the coast on the next home. I was two days too late in reaching New York to join the 2nd Vermont regiment. A cousin who had spent five years in Australia and the employ of the British Government in an engineering company that country in 1844, was anxious that I should join him in a California trip so long ago as February, 1849, but there was a potential rival said no; that was my wife, and a contemplated "cross the ocean" journey in 1860 with a friend and his family met with a still more emphatic negative.

I had paid Mr. Gage for the land, when the partnership affair was settled, but had neglected to secure a deed. Mr. Gage was himself one of the wealthiest citizens of Chicago, and his word as good as gold; apt to procrastinate, however, and the few times I spoke in relation to the business, he would postpone it until "next week."

In the fall of 1873 I was accosted with the remark, "Have you the news? Dave Gage is a defaulter to the city for half a million dollars." The intelligence that an earthquake had devastated California so rapidly recovering from the fire of two years ago, would not have been more startling. It was his second term as City Treasurer, and his popularity was unbounded. He had made over all of his property in the morning I obtained the information, and in the excitement of the occasion he had neglected to except my little property.

"It will be all right," he said; I will speak to Mr. —, the lawyer, and he will take steps to secure your place for you." Mr. — was a man of such power; the transfer was absolute.

"Stick by me," Mr. Gage said, and you will not lose." I believed it as firmly as he did in his own existence. My affection for the man was so great, and his downfall so terrible, that sympathy for him far exceeded regrets for the loss of the place. But I could not endure the thoughts of seeing the house, training stable, and everything I had taken so much pleasure in "fitting up," pass into other hands.

It was a mystery what had become of the money. He was worth a full half a million before accepting the post of City Treasurer, and his adventures, so far as known, were uniformly profitable.

Horses," said one set. Notwithstanding the lavish expenditure attending carrying on the place, the two years of our partnership showed a clear profit of \$23,000, and it was my share of that which paid for my land, and some other indebtedness to him. John H and two mares, bought in Boston, cost \$5,000 in September, 1871. At the sale in June they brought \$8,100. The next highest price paid was \$800 for a mare named Zero. A Mr. Fenton—brother-in-law to Dan Mace—paid \$2,400 for a mare.

Horses I had bought for from \$200 to \$300 brought from \$500 to \$1,000, and the young stock more than quadrupled the invoice price. He did not transfer a claim against the Iowa farm of \$3,500; that and the mares—Albatross and Wananitha—he turned over to me, and I commenced preparations for the long-deferred journey to the occident.

The carload of household goods (all of the horses could not be crowded on one car), and two thoroughbreds and one trotting mare were shipped by my friend John Reber, Lancaster, Ohio, to be bred to imported Hurrah.

They were supposed to be in foal to A. W. Richmond, but Wananitha was bred to Columbia had a filly, a sister to Columbine; and this filly, which I named Collea, and is so recorded in the Stud Book, promised to be a very fast trotter, though her speed was rendered nearly useless by improper handling.

She was reported to have trotted a mile in 2:15, and that she could show inside of a 2:20 gait is beyond question. She had gained a record of 2:35½ under the name of Lady Richmond, and the "Hester" erroneously chronicles her as being by Bonnie Scotland. The following year she had a colt got crippled and died; the following year she had a colt by Hurrah, and as it was foaled on my birthday, I named her Annie.

She was trotted one whole season to avoid a record; second in a heat was trotted in 2:23, no better when it was ten seconds slower. The owner at that time was "Knap" McCarthy, and when he visited California he was loud in her praises, claiming that she could beat 2:20 whenever he wanted.

It was a sort of retributive justice that she died the winter following her, or rather her owner's, campaign of fraud. The buds were scarcely yet swelling when we left Riverside in the latter part of April. The car loaded with horses, which started at the same time, contained eleven—six thoroughbreds, Hock Hocking, Craigie, Three Cheers, Lady Amanda, Marion, and Double Cross; five mares, A. W. Richmond, Albatross, Triple Cross, Avola, and Columbine.

It was a backward spring, as fields and prairies were still brown, and the trip across Illinois and Iowa presented few attractions. A stop was made at Omaha, the intention being to wait there until the horses were ready, as a change of cars had to be made, but had the good fortune to find Matt Allen there, and he kindly offered to assist Billy in fixing up the sleeper.

The stop was fortunate, however, inasmuch as the sleeper first occupied was crowded, and the delay put us on that which left Chicago the next day, and, consequently, not so great a rush, plenty of room, and as pleasant company as could be desired. Not a single peevish, discordant or jangling occupant; not one that did not strive to make the journey agreeable.

There were two more sleepers on the train, and though, of course, we were more intimately associated with our own party, there was the same good feeling and reciprocal kindness on the part of all the passengers. Whist, cribbage, and other games for those who were addicted to those amusements; conversation, the country we were bound for being the most absorbing topic. The morning of the 15th, which was to land us in San Francisco showed gloomy surround-

ings. Masses of snow, springing from which were melancholy pine trees, and then the somberness of the snowsheds. When it was served, and a capital *dejeuner* it was, the landlord invited me to the upper story of the hotel to show where the snow had been away in order to obtain light in the upper windows. It could be possible that what had been read and heard of the country within a few hours ride, was anything but prodigious exaggeration. A short interval from leaving where snow was banked against the side of a two-story house to where there was corroborative testimony. As the cars rattled down the grade from the summit, and by the time the post prandial cigars were resolved into ashes the evidence was clear. There were bare patches in the woods, and the streams which came from the glens had the cadence of springtime; a little farther on the white robe was replaced by an emerald mantle, and then patches of flowers and blossoming shrubbery, and the sun's rays came streaming fervid through the raised windows. Air bland and laden with moisture, and the sunshine so different from that which blinded with glare reflected from the white mask. Fields of waving grain, which rustled in the breeze, and pasture fields with foals cavorting around them and cattle with their heads buried in the herbage or quietly rumbling as they basked in the sunshine, the very picture of contentment.

California to me had been a land of shadows. Bright sunshine is true, gorgeously tinted, a refulgent haze on which were scenes of surpassing loveliness, and yet a doubt whether fanciful imaginations or truth had directed the brush. Ravines filled with gold, and gurgling over golden pebbles, the rush, the excitement, the hurried pace more than the slaves of Lamp and Ring could control. A portion of California's history had less fascination than descriptions of the country, and California life in the halcyon days, the portraits which had left vivid impressions that thirty years of stirring scenes failed to efface. A third of a century, however, had wrought out of the enthusiasms of boyhood and early manhood shorn of their exalting proportions, but with enough remaining to cast a glamour over the land which had awakened so many rose-colored day dreams.

But, if romantic fancies have partially relegated to the "phantasy memory," enthusiasm was not entirely squelched. The most absorbing of pursuits to its ardent votaries, is that of breeding, racing, catting, and developing "fast horses," and the person who does not enthuse when once fairly launched in the "swim," has little to boast in his composition. Always fond of horses from the time I began as an active participant, and from the commencement a student of the mysteries of breeding and all pertaining to the pursuit, at the time of my first arriving in California, I was nearly as much of an enthusiast in respect to horses as I had been in the desire to reach the country which had excited youth's bright visions. Before reaching Sacramento I was convinced that the knowledge I had obtained of this country, from reading, had not misled in regard to its advantages for horse raising. I was on the platform of the car when the train was passing the northern turn of the Sacramento track. Several horses were in the enclosure, and in the inner field were mares and foals. Plump and the stud and still plumper youngsters, and the day more like the middle of June in Iowa than the early part of April.

The forward foals, the luxuriant herbage of the pastures,

the fields of grain, which was nearly at its full height, showed that spring was merging into summer. Scarcely a green blade in the country through which we had traveled for so many days, not a bud which had opened into a leaf as large as the ear of a mouse (the earliest rule for corn planting was when the apple tree leaves had that growth), and with the spring wheat and oats destined for sowing in the granaries, and here, what a contrast! There was not so much to interest while the train stopped at Sacramento; but once more, skirting the river, with still better illustrations of the natural advantages for agriculture, horticulture, and stock breeding. The host and other games had lost their charm, and the passengers were thoroughly absorbed in the changing views.

The long swing around Mount Diablo, through the Livermore Pass, and it was growing dusk when we emerged from the Niles Cañon, and "passing the bay" was done in the dark. As I had noticed that the gates closed and pools were sold at the Lick House, that, of course, the hostelry selected, and a majority of the passengers went to that place. An old friend was there to welcome. He had crossed the plains in 1860, and was then living in Healdsburg. California hospitality was amply exemplified that first evening.

It was late when the Lick House was reached, and to indulge in the evening supper smoke the bar-room was visited. That was also a surprise. Another evidence that the country so liberally endowed with all that was needed to make life enjoyable, was not lacking in respect to means of adornment. The bar was the finest I had ever seen; but to escape the imputation of over-coloring, due to the early impressions of the place gone by, I quote a paragraph from my first California letter to a New York paper: "This saloon in its appointments and finish is the most I ever saw. Everything is in good taste from the carpet to the frescoes on the ceiling. The whole of the woodwork, counter, bar, and scotching, doors, window-frames, etc., being of California laurel, polished in the highest degree of art. Even the vestibule is finished in the precious wood and the carving as ornate as would be in accordance with the general design. I never saw wood that I thought as handsome as the laurel of this coast. It takes a high polish, the grain being peculiarly beautiful. The color is light, just the shade to look cheerful, yet with tinge enough to appear rich."

The rooms were crowded, among the assemblage being several horsemen whom I knew, and it did not require many minutes to become acquainted with the home division. Genial, social, gentlemanly, the only drawback, such an exuberance of hospitality, so attractive, that it was well towards morning when the party broke up. The trip to Healdsburg—by stage to Donahue, and then by rail to the point of destination—added no conviction, that when our old friend termed it "God's own country," he was not far out of the way, so far as Nature could accommodate. The horses were coming quicker than I anticipated, as I learned from a telegram sent by Billy. They were billed to San Francisco, and the privilege of stopping at any place between. My intention was to stop them at Sacramento, as I was so well pleased with the view from the car platform as the train flew by the racecourse, but I could not get there in time, and Oakland was substituted. My first stop to that track was made in the early morning, and a finer morning could be difficult to imagine.

Everything was in the nature of a surprise. The track in good shape as the best in the East were kept during a first class meeting, and when informed that during the whole dry season it was in good condition as it then was, that nightly waterings were given to harrows and smoothers, and nearly as much care taken to keep the track in shape for exercise as when races were in progress, I was struck by the advantages offered to horses in training. But the most striking feature was the field inside of the track and the corners where the grass was undisturbed. "Up to their eyes in clover" was no fancy description of the clover which reached above the knees of the horses; oak-leaved clover though of a new kind to me, and in places a thick matting of which had a queer look, more like weeds than herbage for horses. At the first introduction to that weed was somewhat singular. After the horses had a day's rest in their well bedded boxes, I directed the boys to let them out to graze. There were plenty of patches of clover which had a more tempting look than the red clover of the East, but after a while the two horses would pull away from that and tear huge mounds of leaves from the weed-like plants. "Do not let them eat that, it is poisonous," was my charge to the boys; but if not permitted to eat the clover or the grass which had the form of oats, nothing was touched. Then Willis Hull came to look at the horses, and I called his attention to the apparent anomaly.

"What's the matter, Mr. Hull," I said, "these horses will not touch that fine clover, and are determined to eat those weeds, which are like wild geraniums, and may be poisonous?" "Weeds," he responded, with a look of pity for the ignorance displayed, "fill-a-ree, the best feed we have in the spring of the year. That is the clover, and as long as there is fillaree and wild oats to eat, that is the best to be touched until it has ripened." That was my first lesson in connection with the native grasses of California, but the initiatory was thinking, and before the summer came to a close I had advanced in knowledge as to be able to reconcile the hitherto incredible relation to the phenomenal endurance of California mustangs as Fremont described, with the probability of truth, and I might say the fullest conviction that they were in accordance with the veracity.

In the inner field there was a throng of horses and cattle. Standing in the luxuriance of herbage, my eastern experiences told me that however favorable the weather, in two or three weeks, a month at the farthest, it would be as brown as the track. Not more than two acres, as there was an inner course, and a creek crossing it, and two animals to each acre. Time proved this a false estimate until the first of July, and when, to an eastern-taught eye, the ground seemed utterly barren, horses still kept fat. The rejected clover was the explanation. When the stalks were dry, or, more properly cured, they were eaten with avidity, but the most nutriment was in the seeds. The distinctive name, burr-clover, comes from the seed being inclosed in a sphere-shaped burr, the largest of which is scarcely an inch in diameter. The covering is in spiral layers, between which are the small oleaginous seeds. So abundant are these burrs that the ground is literally covered with them, gathered in depression where they can be picked up by the lips or lapped up by the tongue.

The yearlings and two-year olds, two of each age, and

them through the gate Mr. Hull was again an observer. "That's a better bred one, that chestnut yearling, than the two fillies," he remarked. Double Cross was the one he selected, and a month more would make him an actual two-year old. I did not correct him in his estimate of his age, being loth to admit that such a runty, pot-bellied colt had been brought so far, though I confirmed his judgment of his superiority of breeding by reciting his pedigree. While I was away from home the summer he was a yearling, he had been turned into a pasture field with some other colts, and the green-headed flies nearly killed him. Then the grasses on the low-lying prairie near Chicago were provocative of worms, even old horses being almost sure to be killed with these troublesome parasites. It was fully two years after the colt landed at Oakland before the effects of flies and sour grasses were overcome. Here was another point in which California was fully discovered to be far in the lead of any other country I had any knowledge of—that being exemption from the winged pests which were such a drawback to horse breeding in the prairie States, and also some of the eastern and "middle" commonwealths of the Union. Also gnats, mosquitoes, sand flies, bob flies, and, worst of all, the green-headed flies, which in some sections compelled clothing horses with netting at work in the fields, to guard them against their attacks. Though in some parts of California mosquitoes may be somewhat troublesome, there are plenty of locations where they are practically unknown.

While I was so much "taken" with California from the first, and with increasing satisfaction as the months passed, my first season was marred by a good deal of bad luck. The first strong gallop given Hock Hocking and Marion, the former split the quarters on both fore feet, and Marion, so far as I could determine, broke off a wing of the coffin-bone. Three Cheers sprung a back tendon, Lady Amanda had a return of the influenza, which prevailed in the East the winter previous to my coming there. From a couple of races ran at Chicago I considered the Cheers one of the best racehorses I had ever seen, and I won a race with Marion, beating a daughter of the famous Mamona, and under such circumstances that also marked her as of a very high class. Hock Hocking was the first winner, and, as a letter which I sent to a New York paper, printed in November, 1874, contains a notice of that and other things pertaining to my first season in California, a portion of which is quoted. A previous letter had miscarried:

* And I was also anxious to return my thanks for the courtesies and kindness shown me by the members and officers, and those of the State Agricultural Society; and to the whole people whom I have met in California. The most gratifying exhibition of it was when Hock Hocking won the race at Sacramento. Such warm congratulations I never experienced before. Men who had contending horses, those who had been nearly on the race, acquaintances of only a few hours, joined in this evidence of their good wishes and overwhelmed me with their kindness. I wanted them to know that I appreciated this by making a public acknowledgment as near the time as possible of the occurrence, and if that acknowledgment has miscarried, to repeat it with heartfelt thanks for the manifestations. Winning the purse was not a tithe; a hundred such purses would not have gratified me nearly so much as being the recipient of so much kindness. A continuous run of bad luck ever since I landed in California, horse after horse going wrong, this was the first gleam of sunshine, the only one of the silver lining. The evidently sincere congratulations rolled the black cloud over; the side presented was not only silver-lined, but brilliantly bordered with gold, and these indistinguishable radiant visions I have seen hanging on Mount Tamalpais when the sea was dipping into the ocean so far, so very far beyond the Golden Gate. The horse came in for his share, and to him the far greater part belongs. A plate of blood on the side of one forefoot to hold the separated fibers together; blood was streaming from the other from a crack which "burst" while running the first heat; struggling

violently under these difficulties, never flinching, conquering the most acute determination to win; to him belonged the plaudits which greeted his victory, wonder we become attached to the thoroughbreds when, in addition to the full form in the animal world, are joined the qualities which are the noblest of man?

One good result followed the mishaps to Hock Hocking and Concussion was the evident cause, and to obviate the danger which was given than ever before, and that and experiments consequently that study, have resulted in that much knowledge at least, that not had a horse of my own breeding, or purchased when you has had a quarter-crack, contracted hoof, splint, or any growth of bone on the legs since the system was adopted. As stated, the system consists in following Nature as closely as the horse is put to will permit, and that means as small a portion in the shape of shoes as possible, restricting metallic "protection" that portion of the horn where the wear is greater than the supply. Tips, or more properly, sectional shoes, of various patterns have found sufficient, and in this connection it will be proper that Anteo never had a full shoe on his front feet, or Anteo either front or hind feet until after I sold them.

In order to come within the limits I have marked for this article to give a little attention to that portion which is of greater interest, the peculiar advantages that California presents for breeding and training racehorses and trotters, and, in fact, for developing the highest type of all kinds of horses, my efforts in that direction are restricted to a brief summary.

As stated, I brought eleven horses here in April, 1874, and it is of gratification to me that the importation has been beneficial to the horse interests of the State. Hock Hocking, Three Cheers, and Cross have distinguished winners to their credit. Marion is regarded to be one of the foremost of the great dams of racing. Lady Amanda is likely to obtain distinction. Marion's position is very remarkable. Duchess of Norfolk, Emperor of Norfolk, El Rio Rey, a quartet which is hard to equal in American racing statistics, and several others which are not far behind. The first of the trotting list must be given to Columbine, the dam of Anteo, volo, Coral, and others. She is the only mare which has two daughters with records below 2:20, and which have sold for \$65,000 and \$75,000. A. W. Richmond, with limited opportunities, has several trotting representatives from 2:19½ to 2:30, and two pacers with records of 2:17½, while his daughters are making their mark as the dam of trotters. There is another point which is a source of gratification being that in my residence of seventeen years in California, with a total of thirty-eight horses, only one has been lost from sickness, in my opinion, due to a surgical operation, the result of a *saliva calculi* which disarranged the digestive organs by passing a flow of saliva through the orifice which should have gone to the stomach. This immunity from fatal disease must, in a just measure, be ascribed to the climate and other conditions peculiar to California, though, of course, I attribute a portion of that success to the system from my former practice in stable management.

ADVANTAGES PRESENTED BY THE CLIMATE, SOIL, AND TOPOGRAPHY OF CALIFORNIA, FOR THE BREEDING AND REARING OF FAST AND FINE HORSES.

While climate and soil are the main factors in producing the highest type of horses, there are other conditions which are potential, and even if they may be considered of minor importance exert a beneficial influence, and the absence of which retards the perfect development of physical and mental qualities. That the climate of a great portion of California is more favorable than any other section of the United States, cannot be successfully controverted, when the isotherm of the coast and of other places are brought into comparison; that it is better adapted for breeding and rearing horses which are called upon to perform extraordinary tasks. The capacity to run fast or to trot fast, and keep up speed nearly to the fullest limit for a distance, demands a combination of qualities. What is called "form" is the physical essential, "nerve force" the mental. Form, when that word is used to denote the outward shape—that part of the animal which the eye measures—means harmony of proportion, symmetry of figure, a general resemblance to the best model for speed as exhibited by the greatest performers. While experts may be able to guess form, outward signs, possession or absence of nerve power, it is only a guess, and, in fact, neither physical nor mental can be accurately gauged by any other method than actual tests.

There is no necessity in this article for dwelling on that part of horsemanship, but rather to give reasons for stating that California presents superior natural advantages for horse breeding, and why, with these, a class of procreative animals, and the same care awarded, the progress will be better. No one will question the statement that the drawbacks, if not too onerous, which an unfavorable climate presents, may be overcome by judicious management. To dispute that, Salvator and Maud S, Jay Eye See, and Nelson would have to be ignored. When Nature has done so much towards perfection of physical qualities as to greatly lessen the labor of man, which is necessitated in countries not so favored, the advantages are manifest.

That the climate of California should have the first place in the catalogue of advantages, is so absolutely true that there are no grounds to dispute it, and no necessity for arguments to substantiate the claim, other than to say that when that superiority is acknowledged its importance must be granted.

Outdoor temperature cannot be governed, although it may be modified by planting trees or the erection of guards against prevailing winds. Snow and sleet, cold rains and intense frosts, compel better provision for animals, and though warm stables, as warm as can be with artificial heat, are imperative, even these fail to overcome climatic advantages which prevail over all of the Northern and Middle States of the Union, and are not unknown in those farther south than Kentucky.

Temperature has so much to do with perfecting animal growth, that it is a student of the mysteries of conception, embryotic conditions, and the subsequent steps from the planting of the germ until maturity is reached, even after the time when the body has reached its full proportions, that it demands close attention.

In horse breeding, and especially in training, the influence of heat

and cold is so great that it may be given the first place; perhaps all others, uniformity of temperature favorable to conception, to the embryo, peculiarly favorable to the foal from birth on. The grasses of California are also well adapted to animal growth, which play the most important part—alfilerilla, wild oats, and buckwheat being the main factors in the early days of horse breeding. They, however, must be awarded the credit. Giving an early start in ordinary seasons there would be good grazing in February, grass succulent for months, so that brood mares had a plentiful supply for the foals, the natural food becoming richer as the spring advanced and then the absence of rain and dews, permitting the seed to be cured without detriment, a natural haymow and granary holding hundreds of thousands of acres. Unfortunately, nature would not stand close cropping, and unless there was an extension could not be depended upon to sustain a large stock. But there is a plant, which was the very opposite, as it will afford sustenance to a greater number of animals to the acreage than any other—alfalfa, which gives the owner of a comparatively small farm to carry stock which would require five times the area in the States. Fifty acres of alfalfa, divided into small fields, will sustain many mares and colts that it would appear incredible to calculate. One hundred acres for hay and fifty more for grain, a few vegetables and fruits, and again I will have to write that an estimate of the number of horses which could be maintained on such a farm, even well within bounds, would not be credited by eastern people who were not well informed of the advantages for horse breeding which California offers.

And now some acute questioner might say:

"But if predictions made in 1874 and 1875 were based on good grounds, now, after the lapse of sixteen years, your theory should have been sustained to sustain your position."

That is manifestly sound argument, that if there were nothing to offer than explanations and excuses, I should consider that in a great measure, theory in 1874, was not sustained by the results.

Furthermore, if there were only a fairly good showing, I should be forced to admit, or rather would cheerfully acquiesce in the charge, that all of my rosy visions of the future of California were little better than mirages. Sanguine as I was, so that imbued with the idea that time, and not many years at that, would confess that anticipations have been exceeded. Still further, more enthusiastic bates predicted that at the close of 1890 they would reveal what they now display, I would have thought expectations were on a far too high scale. Facts will now place of fancies, and stubbornly they hold the ground against all lengers.

Wallace's Year Book for 1890 shows that three hundred and two horses have trotted in 2:20, or better. This covers the whole of the trotting, and the whole area of this continent, from the time that Temple succeeded in beating 2:20 by a quarter of a second to the notch performance of Maud S, 2:08½, and the still higher time, comparatively, of a California-bred three-year old, marking 2:10½, this wide scope of territory to draw upon, with thousands of

adding there to scores on this side, who would have hazarded the prediction that nearly 15 per cent, fifty-six in three hundred and eighty, would be found in the "inner circle." In order to show the time by each, and their sires, the list is given:

by three years, by Electioneer	2:10½
Aboul, by Sultan	2:11
Alto, by Electioneer	2:12½
Maud S, four years, by Director	2:12½
Mistake, by Gibraltar	2:14½
by Arthurton	2:15
Samita, four years, by Electioneer	2:16
ed S, by Elmo	2:16½
son, by Electioneer	2:16½
gent, by Doc	2:16½
er, by Electioneer	2:17
Locum, by Electioneer	2:17½
al, by Electioneer	2:17½
on Roy, by Patchen Vernon	2:17½
Stanley, by Whippleton	2:17½
er R, by General McClellan, Jr.	2:17½
al Wilkes, three years, by Guy Wilkes	2:17½
on Wilkes, three years, by Guy Wilkes	2:17½
er Benton, four years, by General Benton	2:17½
ak M, by Priam	2:18
Byron, four years, by General Benton	2:18
al Wilkes, three years, by Guy Wilkes	2:18
al, by Beavis' Blackbird	2:18
et, four years, by Director	2:18½
als, by Electioneer	2:18½
er V, by Sidney	2:18½
un, by Electioneer	2:18½
mel Lewis, by Rifleman	2:18½
n, by Nutwood	2:18½
al Fargo, by George M. Patchen, Jr.	2:18½
er, by Whipple's Hambletonian	2:19
er Skinner, by Alcona, Jr.	2:19
pest, by Hawthorne	2:19
Boy, three years, by Electioneer	2:19½
man, by Elmo	2:19½
gle E, by Nutwood	2:19½
er, by Admiral	2:19½
ada, by Eros	2:19½
evolo, four years, by Electioneer	2:19½
la Rose, three years, by Electioneer	2:19½
er S, by Hawthorne	2:19½
ero, by A. W. Richmond	2:19½
ed G, four years, by Anteco	2:19½
ry Mc, four years, by Nephew	2:19½
er, by Sultan	2:19½
er W, by Electioneer	2:20
al, by Electioneer	2:20
Frank, by Tornado	2:20
er Echo, by Echo	2:20
er, by Abbotsford	2:20
er Derby, by Steinway	2:20
Thomas, by Del Sur	2:20
er Washington, by Mambrino Chief, Jr.	2:20
al Wilkes, four years, by Guy Wilkes	2:20
al, by Dan Voorhees	2:20
er by General Lee	2:20

besides the number in the fast class, which 2:20 or better represents, there are other proofs of the advantages which California climate and afford for the breeding of fast trotters. Twelve in all have trotted in the teens, that is, below 2:13, and, as will be seen by the above list, four of them California-bred. Then Sunol is only beaten by two, Maud S and Jay Eye See, and Palo Alto has trotted in 2:13 in a race, which is the fastest race record. Again, there are fifteen which have trotted from 2:10½ to 2:20 as three and four-year olds, and one of these,

the only two-year old which has got below 2:20. There are many which could be taken from the above table to prove the supremacy with one or two more, I think that the most captious critic will find that the mere list is sufficient. Still the argument might be put that it may be owing to the "potency" of our two most prominent stallions, and that Electioneer and Guy Wilkes should have the credit. Both of these stallions left progeny in the East, not one of which as fast as 2:20. Electioneer has fourteen in the list, Guy Wilkes has Nutwood two, Sultan two, Director two, Gen. Benton two, Hawk two, and Elmo two; in all thirty-four sires of 2:20, or better, than the average.

From any standpoint it is a miraculous showing, and it would be a severe test of one's patience to listen to long arguments that a great portion of the success was not due to superiority of climate.

The admirable showing is not confined to fast trotters, as in the period of seventeen years there has been a corresponding improvement in racehorses. A comparison, however, is not so readily made, in fact, the only real test is actual racing, when comparisons can be made from the same data. Few will deny that several racehorses of the highest type have been bred in California. Volante, Duchess of Mollie McCarty, Emperor of Norfolk, El Rio Rey, Racine, Touraine, and several others could be named to sustain the claim, and it is not that this article has far exceeded the intended limit, I have attempted to amplify on this point. Without taking a good deal of space, little more can be done than to give the names.

ANNUAL METEOROLOGICAL REVIEW

OF THE

STATE OF CALIFORNIA DURING THE YEAR 1890,

BY THE

Meteorological Department of the State Agricultural Society.

Edited and compiled by SERGEANT JAMES A. BARWICK, Observer Signal Corps, and Meteorologist to the State Board of Agriculture.

SACRAMENTO, CAL., April 10, 1891.

J. F. SMITH, *Secretary State Agricultural Society*:

SIR: I have the honor to submit this my seventh annual meteorological review of this State, or as much of it as I could obtain data for. In this year, 1890, there was started by myself, through instructions from the Chief Signal Officer, a weekly weather crop report. It gave such great satisfaction to all concerned that your honorable Board has agreed to assist in its preparation during the coming and harvesting season of 1891.

Very respectfully, your obedient servant,

SERGEANT JAMES A. BARWICK,
Observer Signal Corps, and Meteorologist to State Agricultural Society.

GENERAL WEATHER REVIEW.

ANNUAL WEATHER SUMMARY IN SACRAMENTO, FROM 1873 TO 1890.

Sacramento City is geographically situated in latitude north 38° 35'; longitude west from Greenwich, 121° 30'; elevation above sea level, 35 feet; elevation of the zero point of the barometer cistern above sea level, 35 feet.

The accompanying table gives the average barometer; the highest, lowest, and range of barometer for each year; average temperature; highest, lowest, and range of temperature; greatest and least monthly average of temperature; average maximum, minimum, and range of temperature; average relative humidity and dew point; yearly precipitation; prevailing direction of wind; maximum velocity of wind, and direction at the time of maximum velocity; number of clear, fair, and cloudy days, and number of days each year that rain fell; number of earthquakes, snowstorms, and electric storms; number of solar and lunar halos; light and killing frosts; number of days the maximum temperature was above 90°, and total number of days the minimum temperature was below 32°.

WEATHER REVIEW FOR:	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Average barometer.....	29.95	30.00	30.03	30.03	30.03	30.03	29.99	29.98	29.99	29.98	29.97	29.97	30.01
Highest barometer.....	30.51	30.68	30.49	30.46	30.52	30.74	30.58	30.43	30.50	30.46	30.62	30.47	30.47
Lowest barometer.....	29.46	29.38	29.48	29.61	29.71	29.62	29.42	29.46	29.32	29.45	29.43	29.41	29.43
Range of barometer.....	1.05	1.30	1.01	0.85	0.81	1.12	1.16	0.97	1.19	1.01	1.13	0.96	1.04
Average temperature.....	61.3	60.3	67.2	69.2	68.6	58.8	58.8	61.2	68.8	59.9	60.6	60.9	69.4
Highest temperature.....	100.5	108.0	98.0	98.6	99.8	103.5	100.0	105.0	105.0	100.0	107.5	104.0	102.0
Lowest temperature.....	23.5	25.0	25.0	31.9	27.0	22.0	21.0	34.2	27.5	28.0	19.0	31.0	29.0
Range of temperature.....	77.0	78.0	73.0	66.7	72.8	81.5	79.0	70.8	77.5	72.0	88.5	73.0	73.0
Greatest range of temperature.....	50.0	49.0	48.0	48.7	55.2	59.8	46.0	58.0	62.8	58.7	68.5	54.0	50.0
Least range of temperature.....	21.0	33.7	23.0	27.0	31.6	35.7	30.0	27.0	33.2	36.2	27.0	27.0	28.0
Average maximum temperature.....	81.6	83.7	80.0	81.6	82.0	84.3	70.0	75.2	71.5	72.9	73.3	72.5	70.3
Average minimum temperature.....	41.2	41.2	39.9	42.1	40.1	39.8	49.7	51.8	49.1	47.7	49.4	48.3	48.6
Mean maximum and minimum temperature.....	61.4	62.4	59.9	61.8	61.0	62.0	59.8	62.5	60.3	60.3	61.4	60.9	59.4
Average range of temperature.....	40.3	42.5	40.1	39.5	41.9	44.5	38.8	40.7	42.6	46.2	45.8	23.2	21.7
Average humidity.....	62.2	65.7	64.6	68.7	66.0	69.0	70.7	67.8	70.1	63.7	67.1	69.8	68.0
Average dew point.....				45.7	45.7	47.5	48.5	48.8	47.8	46.0	47.6	46.2	46.0
Prevailing direction of wind.....	S.	S.	S.	S.	S.	S.	S.	S.	S.E.	S.E.	S.E.	S.E.	S.E.
Total precipitation.....	23.45	22.37	31.99	20.71	13.04	13.48	24.92	20.72	18.17	13.43	18.46	27.48	20.95
Velocity of wind.....	62,830	52,214	62,497	57,846	58,874	52,697	62,611	62,405	56,086	61,322	56,964	58,794	59,616
Maximum velocity of wind.....	40	39	40	32	36	36	36	36	44	40	48	42	42
Direction of maximum velocity.....	N.	S.	S.E.	S.E.	S.E.	N.W.	N.W.	S.E.	S.E.	S.E.	S.E.	S.E.	S.E.
Clear days.....	234	238	237	251	249	263	239	227	262	267	238	218	237
Fair days.....	56	58	59	69	76	76	68	88	76	74	75	91	59
Foggy days.....	0	4	5	8	1	11	0	0	27	24	52	57	69
Days of precipitation.....	66	79	70	67	70	54	76	62	57	56	63	77	11
Earthquakes.....	2	0	0	1	0	0	0	2	1	1	2	3	0
Snow storms.....	0	1	1	0	3	2	0	0	0	0	2	0	0
Electric storms.....	4	4	3	4	4	2	2	6	3	2	13	7	2
Solar halos.....	1	3	3	4	5	8	9	1	8	6	13	3	3
Lunar halos.....	18	17	14	24	28	38	31	24	32	13	14	13	19
Light frosts.....	32	27	14	34	40	40	22	40	10	18	14	14	10
Heavy frosts.....	1	1	1	1	1	1	1	1	1	1	1	1	1

MONTHLY SUMMARY AT SACRAMENTO, FOR 1890.

January.—Mean temperature, 43°; 3° cooler than the normal temperature. Highest and lowest temperature, 58° on the 30th, and 29° on the 8th. Rainfall, 6.62 inches, which is 2.86 inches above the normal precipitation obtained from a record of forty-one years. There were 7 clear, 7 fair, and 11 cloudy days, with 17 days on which an appreciable amount of rainfall was measured. There were 9 killing and 2 light frosts. Highest wind velocity, 42 miles, from the southeast, on the 15th.

February.—Mean temperature, 47°; 4° cooler than the normal average temperature. Highest and lowest, 67° on the 3d, and 32° on the 22d. Total rainfall, 4.06 inches; 1.26 inches in excess of the normal precipitation. There were 10 clear, 9 fair, and 9 cloudy days, with 9 days on which an appreciable amount was measured. One frost was all that was seen, and that was a killing one. Maximum wind velocity and direction, 36 miles, from the northwest, on the 13th.

March.—Mean temperature, 53°; 3° cooler than the normal average. Highest and lowest temperature, 69° on the 15th, and 36° on the 10th. Total rainfall, 3 inches; .05 of an inch in excess of the normal precipitation. There were 12 clear, 6 fair, and 13 cloudy days, with 14 days on which rain fell to an appreciable amount. Two frosts, one light and one killing. Highest wind velocity and direction, 36 miles, from the southeast, on the 8th.

April.—Mean temperature, 59°; being 1° warmer than the normal average. Highest and lowest temperature, 80° on the 27th, and 44° on the 4th and 13th. Total rainfall, 1.33 inches; .51 of an inch less than the normal precipitation. There were 18 clear, 10 fair, and 2 cloudy days, with four days on which rain fell sufficient to measure. Highest wind velocity and direction, 33 miles, from the northwest, on the 8th.

May.—Mean temperature, 65°; being the same as the normal average. Highest and lowest temperature, 92° on the 24th, and 46° on the 1st. Total rainfall, 1.80 inches; 1.12 inches in excess of the normal precipitation. Highest wind velocity and direction, 28 miles, from the north, on the 13th.

June.—Mean temperature, 68°; 1° less than the normal average. Highest and lowest temperature, 94° on the 14th, and 44° on the 1st. Total rainfall, nothing, which is .12 of an inch less than the normal precipitation. There were 28 clear, and 2 fair days. Highest wind velocity and direction, 27 miles, from the northwest, on the 25th.

July.—Mean temperature, 74°; 1° warmer than the normal average. Highest and lowest temperature, 102° on the 25th and 26th, and 52° on the 9th. Total rainfall, none; being .04 of an inch less than the normal precipitation. There were 30 clear, and 1 fair day. Highest wind velocity and direction, 24 miles, from the southwest, on the 7th.

August.—Mean temperature, 73°; 1° less than the normal average. Highest and lowest temperature, 96° on the 5th, and 51° on the 19th. Total rainfall, a trace; being .003 of an inch less than the normal precipitation. There were 29 clear, and 2 fair days. Highest wind velocity and direction, 24 miles, from the southwest, on the 17th.

September.—Mean temperature, 70°; being the same as the normal. Highest and lowest temperature, 94° on the 14th, and 50° on the 10th. Total rainfall, .80 of an inch; being .67 of an inch in excess of the normal average precipitation. There were 20 clear days, 4 fair, and 6

RAINFALL IN SACRAMENTO—Continued.

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for Year.	Season of.	Total for Season.
1885	2.16	.49	.08	.68	sprin.	.11	sprin.	none	.08	.02	11.34	5.76	20.72	1885-86	82.27
1886	7.96	.29	2.68	4.08	.07	none	none	none	none	.68	.21	2.21	18.17	1886-87	13.97
1887	1.12	6.28	.94	2.53	sprin.	none	none	sprin.	.02	none	.45	2.09	13.43	1887-88	11.56
1888	4.81	.57	3.04	.10	.40	.08	sprin.	sprin.	.55	none	4.28	4.63	18.48	1888-89	19.95
1889	.15	.33	6.25	.26	3.25	.25	none	none	none	6.02	3.16	7.82	27.48	1889-90	32.27
1890	6.62	4.06	3.00	1.33	1.80	none	none	none	.80	sprin.	none	3.84	20.95	1890-91	116.10
1891	.53	6.61	1.78	*2.04	---	---	---	---	---	---	---	---	---	---	---
Totals	155.42	121.31	122.83	77.42	28.04	4.92	1.44	.11	5.58	32.50	87.89	119.90	804.74	---	816.62
Averages	3.70	2.89	2.92	1.84	.68	.12	.04	.003	.13	.77	2.09	4.57	19.63	---	19.92

* Up to May 1, 1891. † Season up to May 1, 1891.

From the records of Mr. SAMUEL H. GERBAIN, Voluntary Observer of the Signal Service:

YEAR.	First Light Frost of the Season.	Minimum Temperature First Light Frost.	First Killing Frost of the Season.	Minimum Temperature First Killing Frost.	Last Light Frost of the Season.	Minimum Temperature Last Light Frost.	Last Killing Frost of the Season.	Minimum Temperature Last Killing Frost.	First Appearance of Frosts during Fruit Trees.
1889-90	Nov. 8, 1889	40	November 30, 1889	31	May 17, 1870	41	March 8, 1870	31	Feb. 21, 1870
1870-71	Oct. 24, 1870	38	October 27, 1870	30	April 19, 1871	40	March 18, 1871	31	March 8, 1871
1871-72	Oct. 26, 1871	37	November 6, 1871	30	April 12, 1872	38	January 9, 1872	27	Feb. 26, 1872
1872-73	Oct. 22, 1872	37	November 10, 1872	27	April 6, 1873	34	April 6, 1873	27	Feb. 16, 1873
1873-74	Oct. 16, 1873	33	October 17, 1873	29	April 4, 1874	38	March 19, 1874	28	Feb. 14, 1874
1874-75	Oct. 29, 1874	33	November 20, 1874	29	April 7, 1875	31	April 6, 1875; coldest ever known	24	Feb. 21, 1875
1875-76	Oct. 28, 1875	38	No killing frost; coldest on Dec. 21, 1875	35	April 8, 1876	38	January 16, 1876	29	Feb. 20, 1876
1876-77	Nov. 3, 1876	36	November 13, 1876	29	April 23, 1877	42	February 11, 1877	32	Feb. 2, 1877
1877-78	Oct. 31, 1877	33	November 1, 1877	31	March 9, 1878	39	January 12, 1878	30	Feb. 1, 1878
1878-79	Oct. 18, 1878	37	October 28, 1878	29	April 15, 1879	41	February 6, 1879	27	Feb. 15, 1879
1879-80	Nov. 8, 1879	39	November 27, 1879	25	April 16, 1880	37	March 30, 1880	28	Feb. 29, 1880
1880-81	Oct. 31, 1880	35	November 13, 1880	28	March 18, 1881	33	March 17, 1881	31	Feb. 22, 1881
1881-82	Oct. 4, 1881	36	November 11, 1881	30	May 15, 1882	41	March 9, 1882	29	Feb. 24, 1882
1882-83	Oct. 6, 1882	42	November 13, 1882	27	May 2, 1883	41	February 18, 1883	29	Feb. 19, 1883
1883-84	Oct. 16, 1883	39	November 4, 1883	31	April 17, 1884	43	February 18, 1884	31	Feb. 20, 1884
1884-85	Sept. 30, 1884	41	November 30, 1884	31	April 22, 1885	41	January 26, 1885	31	Feb. 10, 1885
1885-86	Oct. 11, 1885	38	No killing frost; coldest on Dec. 23, 1885	34	April 14, 1886	39	January 10, 1886	27	Feb. 8, 1886
1886-87	Oct. 9, 1886	40	November 4, 1886	32	May 10, 1887	34	February 26, 1887	26	Jan. 28, 1887
1887-88	Oct. 20, 1887	37	November 25, 1887	28	April 26, 1888	38	February 3, 1888	28	Jan. 20, 1888
1888-89	Oct. 13, 1888	37	November 6, 1888	28	March 19, 1889	34	February 19, 1889	26	Feb. 3, 1889
1889-90	Oct. 29, 1889	36	December 29, 1889	27	April 14, 1890	35	February 28, 1890	25	Feb. 13, 1890
1890-91	Oct. 11, 1890	34	November 7, 1890	28	March 30, 1891	34	February 25, 1891	26	Feb. 17, 1891

DATES OF SNOWFALL IN SACRAMENTO, AND THE AMOUNT PRECIPITATED.

January 29, 1862, .75 of an inch. January 12, 1868, 1.62 inches. December 3, 1873, 6.00 inches. April 5, 1875, a trace; enough to whiten the ground before it melted. This was the coldest April ever known. A very light trace on January 13, 1879. January 26, 1880, estimated about .25 of an inch; it mostly melted as it fell. February 17 and 18, 1882, light trace. December 31, 1882, estimated about 4.00 inches; measured 1.50 inches actual measurement. February 1 and 6, 1883, a very light fall of snow. January 4, 1888, 2.89 inches. January 5, 1888, 3.00 inches. The snow that fell on the fifth was very damp and packed hard; if it had been as light as that on the fourth, I think we would have had over 6.00 inches. January 16, 1888, a trace. January 12 and 21, 1890, a few flakes of snow, melting as fast as they fell.

FOLSOM, SACRAMENTO COUNTY.

The rainfall data tabulated below are from Folsom, Sacramento County, and were furnished by J. H. SURGES, special River Observer of the United States Signal Service at that point. The rainfall is from September, 1871, to date:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1871	5.50	4.72	1.60	.68	.75	spring.	none	spring.	spring.	.55	1.95	13.12	22.78	1871-72	28.82
1872	1.64	4.06	.34	.06	.08	none	spring.	spring.	spring.	.25	2.80	6.53	18.02	1872-73	15.69
1873	5.26	2.63	1.82	2.08	.81	spring.	none	none	spring.	spring.	1.39	10.51	19.63	1873-74	24.46
1874	6.14	.04	1.24	spring.	.07	1.23	none	none	spring.	.26	5.19	.13	20.59	1874-75	15.70
1875	5.89	4.06	6.62	1.56	.24	spring.	.26	.08	none	3.76	7.12	4.49	22.67	1875-76	30.24
1876	3.38	.68	.81	spring.	1.02	spring.	spring.	spring.	none	.75	.54	1.34	8.52	1876-77	10.19
1877	8.41	8.37	4.23	1.10	.26	none	none	spring.	12	.43	.62	.56	24.10	1877-78	25.00
1878	4.87	4.94	5.43	3.38	1.44	none	spring.	spring.	none	1.21	2.20	3.19	26.78	1878-79	21.91
1879	1.51	2.13	1.40	1.13	2.06	none	spring.	none	none	spring.	.10	9.85	28.44	1879-80	25.09
1880	6.70	6.07	1.88	1.13	spring.	.68	none	none	.40	1.21	1.57	3.45	22.59	1880-81	25.91
1881	2.38	3.01	3.82	2.51	.27	.06	spring.	none	.68	2.81	3.95	.74	20.23	1881-82	22.22
1882	2.11	.80	5.46	1.10	4.57	none	none	none	1.82	1.41	.81	.92	19.00	1882-83	31.02
1883	3.88	5.92	8.14	5.32	1.16	1.64	none	spring.	.64	2.02	none	6.13	37.85	1883-84	16.58
1884	1.91	.84	.15	1.63	spring.	.21	none	spring.	.21	spring.	10.91	4.88	20.81	1884-85	34.75
1885	7.60	.90	3.16	6.78	.29	none	none	spring.	none	1.34	.56	3.35	23.97	1885-86	20.11
1886	1.27	9.21	1.30	2.84	.08	.22	none	spring.	.38	none	.69	4.82	20.66	1886-87	16.28
1887	5.83	.84	3.08	.12	.35	.27	none	spring.	.57	none	3.71	4.32	19.12	1887-88	20.43
1888	.32	.68	7.07	.61	2.89	.23	none	none	none	5.70	4.85	9.41	31.36	1888-89	42.95
1889	7.67	5.26	5.68	2.09	2.29	none	none	spring.	1.53	.03	none	4.65	29.25	1889-90	42.95
1890														1890-91	*42.96

Average seasonal precipitation for nineteen years is 23.47 inches.

* Up to January 1, 1891

Weather summary for the year 1890, at Walla Walla Creek (near Fort Jones). By ISAAC TIRCOCK, Observer.

MONTH.	Mean Maximum Temperature..	Mean Minimum Temperature..	Mean Monthly Temperature..	Highest Tem- perature	Lowest Temper- ature	Total Precipita- tion	Clear Days	Fair Days	Cloudy Days	Rainy Days	Prevailing Wind -Direction
January	33.0	22.9	25.88	44	6	11.86	2	5	9	13	N.
February	40.7	24.1	29.46	48	3	9.10	11	10	2	6	S.
March	48.1	29.2	34.85	60	15	4.93	10	4	5	12	S.
April	61.2	34.8	44.15	76	23	1.24	16	5	5	2	S.
May	72.0	44.9	55.23	87	32	1.23	18	6	5	3	S.
June	74.8	44.7	56.47	94	32	.28	13	12	5	2	S.
July	83.7	51.2	64.43	94	40	.00	30	1	0	0	N.
August	83.6	53.2	64.69	92	39	.86	20	6	5	0	N.
September	78.8	49.7	60.73	86	42	1.84	26	1	2	2	N.
October	62.2	38.3	47.00	69	23	.10	18	9	4	0	N.
November	56.0	34.2	41.54	66	24	.19	19	8	1	2	S.
December	41.1	30.9	34.40	62	16	3.85	3	4	19	5	S.
For the year	61.2	38.2	46.57	*94	13	35.53	186	70	64	46	S.

There were three killing frosts (in October), and ten light frosts (three in June and seven in October).

* June. † February. ‡ Snow.

RAINFALL IN SCOTT VALLEY, SISKIYOU COUNTY, CAL.
By Mr. ISAAC TITCOMB, of Walla Walla Creek, eight miles northwest of Fort Jones:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	Total for Season of Year.	Total for Season.
1859	2.59	1.25	4.12	75	2.00	.40	1.62	.50	.87	1.00	4.33	.75	23.52	1859-60
1860	1.12	2.50	2.50	3.00	.54	.30	none	none	.49	2.22	2.00	5.74	23.52	1860-61
1861	9.29	3.75	1.32	2.00	1.00	.80	none	none	none	.51	11.56	10.63	32.66	1861-62
1862	4.75	1.75	2.45	2.00	1.40	.80	.10	none	.02	.15	1.12	1.90	20.45	1862-63
1863	2.07	4.43	.82	2.70	.51	1.33	.25	.09	.40	.25	1.85	6.17	22.29	1863-64
1864	1.87	2.40	1.30	.32	.05	.31	none	.03	.04	.31	6.00	12.75	26.57	1864-65
1865	6.59	3.50	9.20	.02	1.72	.75	.35	.02	1.15	1.33	9.79	1.21	20.54	1865-66
1866	9.12	2.02	.64	1.34	.44	.01	.50	.47	none	.08	2.51	11.75	36.96	1866-67
1867	3.06	1.50	3.70	1.14	.18	1.06	none	none	.06	.50	.77	2.80	14.77	1867-68
1868	5.76	1.13	1.32	3.61	1.52	.69	.13	none	1.00	.01	3.04	3.56	21.77	1868-69
1869	5.00	2.91	1.73	1.37	1.12	.13	none	none	.01	.02	1.00	3.50	16.79	1869-70
1870	1.86	2.47	1.62	2.27	.55	.26	.35	none	.37	.05	1.62	7.68	19.10	1870-71
1871	4.18	6.94	1.40	.34	.25	.08	.01	none	.41	.16	2.67	3.38	19.78	1871-72
1872	1.33	3.00	1.05	1.50	.27	.03	.03	.05	.37	.94	1.71	4.49	14.77	1872-73
1873	6.38	1.80	3.66	1.55	.71	.13	.01	none	none	1.55	4.33	7.33	20.63	1873-74
1874	3.13	1.17	1.79	.35	.75	.12	.38	.06	none	4.45	7.31	7.33	25.83	1874-75
1875	2.26	3.33	3.94	.71	1.19	.18	.34	1.00	.02	3.75	.54	.01	18.27	1875-76
1876	1.71	4.23	3.10	1.23	1.48	.71	.12	.02	.01	.45	.67	1.62	15.35	1876-77
1877	9.72	6.53	8.74	.27	.20	.12	.01	.06	.36	2.81	2.16	1.14	27.12	1877-78
1878	3.25	3.54	8.39	2.66	1.40	.27	.38	.47	.11	.81	4.64	4.58	30.50	1878-79
1879	10.62	2.32	2.65	3.39	1.32	.02	.37	.07	none	.18	.32	6.76	30.02	1879-80
1880	13.95	6.53	7.79	1.19	1.17	1.04	.54	none	.76	3.53	2.40	4.60	35.54	1880-81
1881	4.48	6.69	2.22	2.45	2.65	.08	2.49	.63	1.44	2.86	2.72	3.75	23.47	1881-82
1882	2.58	1.51	1.11	3.06	1.65	.87	.40	.01	.66	2.41	1.11	4.75	21.06	1882-83
1883	4.28	3.14	3.45	1.11	2.65	.08	.40	.01	.60	1.04	1.16	8.18	23.06	1883-84
1884	2.50	3.49	.11	1.96	1.40	.03	1.62	.01	.83	1.85	10.24	3.28	26.91	1884-85
1885	7.22	1.82	1.82	3.23	1.77	.03	2.13	.85	none	.09	1.73	6.67	27.17	1885-86
1886	5.18	4.96	1.07	2.63	1.94	.36	.87	.18	.88	.09	1.97	5.68	27.17	1886-87
1887	9.75	1.62	2.38	2.58	1.70	.33	1.11	.03	none	.09	1.97	5.68	27.17	1887-88
1888	3.13	1.62	2.38	2.58	1.70	.33	1.11	.03	none	.09	1.97	5.68	27.17	1888-89
1889	3.13	1.62	2.38	2.58	1.70	.33	1.11	.03	none	.09	1.97	5.68	27.17	1889-90
For the year	80.50	80.50	80.50	80.50	80.50	80.50	80.50	80.50	80.50	80.50	80.50	80.50	80.50	80.50

Weather summary for the year 1880, at Crescent City, Cal. By D. E. SARGENT, Observer.

MONTH.	Prevaling Wind Direction	Killing Frosts	Light Frosts	Rainy Days	Cloudy Days	Fair Days	Clear Days	Total Precipita- tion
January	S.	10	0	26	28	1	2	24.98
February	N.W.	2	4	17	19	4	5	23.49
March	S.	0	7	17	19	4	8	13.51
April	N.W.	0	3	5	12	7	11	4.07
May	N.W.	0	0	6	8	11	12	5.2
June	N.W.	0	0	5	10	9	6	2.27
July	S.	0	0	2	15	15	8	.33
August	S.	0	0	1	11	12	6	.06
September	S.	0	0	1	19	5	6	.42
October	N.W.	0	8	3	4	8	19	1.11
November	N.W.	0	7	1	7	7	19	.08
December	S.	0	13	15	9	13	9	9.66
For the year	S&NW	12	45	99	152	96	117	80.50

Average temperature for nine years, 78.6°.

HYDESVILLE, CAL.

Weather summary for the year 1890, at Hydenville, Cal. By E. T. Foss, Observer:

MONTH.	Mean Maximum Temperature	Mean Minimum Temperature	Mean Monthly Temperature	Highest Temperature	Lowest Temperature	Total Precipitation	Rainy Days	Light Frosts	Killing Frosts
January	46.0	32.9	39.5	53	24	17.31	25		5
February	51.7	34.9	43.3	63	24	10.13	17	3	8
March	55.4	36.7	46.1	64	29	8.62	18	3	8
April	58.5	41.7	50.1	70	29	1.63	5		5
May	66.2	47.6	56.9	86	39	1.58	6		
June	68.1	46.4	56.8	78	39	.67	4		
July	67.5	49.3	58.8	72	45	.15	1		
August	68.7	48.9	58.8	76	39	.00	0		
September	68.4	43.9	56.1	81	39	1.51	2	6	3
October	65.6	40.6	53.1	79	80	.04	0	8	7
November	62.9	37.8	50.3	72	29	.49	2	5	9
December	56.1	38.1	47.1	63	30	5.85	8		
For the year	61.1	41.5	51.3	*86	+24	47.98	87	25	45

* In May. † In January and February.

Meteorological data furnished by MAURICE CONNELL, Observer Signal Corps in charge:

1890.	Jan- ary.	Febr- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Yearly Average.
Mean barometer	29.97	30.01	30.02	30.06	29.98	30.04	30.03	29.97	29.93	30.03	30.09	30.04	30.01
Mean temperature	42.2	44.4	46.9	49.0	54.0	56.2	56.7	55.8	53.2	51.6	50.0	48.4	50.6
Mean dew point	37.0	39.0	41.0	44.0	49.0	50.0	53.0	53.0	51.0	48.0	47.0	45.0	46.0
Mean humidity	84.0	81.0	81.0	85.0	86.0	86.0	89.0	91.0	95.0	92.0	91.0	90.0	88.0
Mean maximum temperature	43.0	50.2	53.7	53.8	59.3	60.0	61.1	60.1	67.3	68.2	66.6	64.4	56.1
Mean minimum temperature	36.3	38.6	40.1	44.2	48.8	50.5	52.3	51.5	49.1	45.0	43.5	42.3	45.2
Highest temperature	54.0	59.0	60.0	63.0	73.0	65.0	65.0	65.0	69.0	70.0	66.0	66.0	78.0
Lowest temperature	23.0	27.0	31.0	35.0	41.0	45.0	48.0	45.0	46.0	38.0	35.0	36.0	27.0
Mean daily range of temperature	11.7	11.6	13.6	9.6	10.5	9.5	9.5	8.6	8.3	13.1	13.1	12.1	10.9
Total monthly velocity of wind	5,752	4,997	4,685	5,965	5,775	6,117	5,163	3,969	2,808	3,800	2,905	3,368	55,384
Maximum velocity of wind	36	35	35	42	36	35	25	25	34	35	36	37	42
Direction of maximum velocity	N.W.	N.	S.W.	N.	N.W.	N.	N.	N.W.	N.W.	N.	N.	S.E.	N.
Prevailing winds	S.E.	N.	S.E.	N.	N.W.	N.W.	N.W.	N.W.	N.W.	N.	N.	S.E.	N.
Clear days	3	5	5	5	5	8	6	5	4	11	15	8	80
Fair days	12	9	13	6	14	12	13	12	12	14	5	12	121
Cloudy days	25	19	19	19	12	10	12	14	22	6	10	11	164
Rainy days	18.26	13.88	11.57	7	7	9	2	2	4	3	4	14	115
Total precipitation	3.70	.81	2.90	1.37	1.71	.87	.08	.02	.79	.44	.18	5.48	55.64
Greatest amount in twenty-four hours					.83	.35	.06	.01	.68	.41	.08	2.21	

NOTE.—Barometer corrected for temperature and instrumental error only.

ARCATA, HUMBOLDT COUNTY, CAL.

Arcata is geographically situated in latitude 40° 49' north, 124° 10' west. The following summaries of rainfall by season furnished by HERMAN FRY, Observer:

SUMMARY FOR 1886-87. SEASON BEGAN OCTOBER 22, 1886.

MONTH.	Number of Wet Days.
1886—October	9
November	4
December	20
1887—January	20
February	21
March	13
April	8
May	9
June	5
Total	130

SUMMARY FOR 1887-88. SEASON BEGAN SEPTEMBER 6, 1887.

MONTH.	Number of Wet Days.
1887—September	11
October	10
November	6
December	20
1888—January	21
February	11
March	9
April	5
May	4
June	13
Total	110

SUMMARY FOR 1888-89. SEASON BEGAN OCTOBER 6, 1888.

MONTH.	Number of Wet Days.
1888—October	10
November	11
December	11
1889—January	11
February	11
March	11
April	11
May	11
June	11
Total	110

SUMMARY FOR 1889-90. SEASON BEGAN OCTOBER 7, 1889.

MONTH.	Number of Wet Days.	Precipitation.
October	13	8.27
November	10	3.61
December	22	12.57
January	25	16.85
February	18	14.78
March	18	11.94
April	7	2.26
May	5	2.05
June	5	1.18
Total		73.51

SEASON OF 1890-91. BEGAN SEPTEMBER 29, 1890.

MONTH.	Number of Wet Days.	Precipitation.
September	2	.92
October	3	.45
November	4	.22
December	12	4.84
January	13	3.62
Total for season up to March 1, 1891		10.05

SUSANVILLE, LASSEN COUNTY, CAL.
Weather summary at Susanville, for the year 1890. By T. B. SAUNDERS, Voluntary Observer:

MONTHS.	Highest Temperature	Lowest Temperature	Mean Temperature	Rain	Snow—Inches	Direction of Wind	Date of Frosts	Number of Days Snow Fell	Snow at End of Month—Inches	Thunder Storms
January	47	8	20	6.72	76½	N.		24	26	
February	54	10	28	5.20	51	N.		16	18	
March	58	12	31	4.70	14½	N.		10		
April	78	32	50	1.06		N.				
May	89	33	61	1.51		N.		8	1	2
June	88	42	62	.14		N.	*1st, 2d	1		2
July	100	60	73			N.				
August	98	56	75	.15		N.		1		1
September	88	53	69	.15		N.	†29th	2		3
October	76	36	57	trace		N.	†9th			
November	70	27	42	.25	3½	N.		1		
December	62	12	34	3.37	16½	N.				
For the year	909	360	602	23.30	151			66		8

* No damage done to fruits or vegetables. † No damage. ‡ First killing frost of the season.

VALLEY SPRINGS, CAL.

The following table of rainfall is from record kept by H. W. TURNER, from July, 1887, to December, 1890:

YEAR.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	Total for Year.	Season of Year.	Total for Season.
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The following table shows the climatic condition in all its features for fourteen years, from 1877 to 1890, both years inclusive, at Red Bluff, California. Furnished by JOHN J. McCLINTOCK, Observer, Signal Corps:

ANNUAL WEATHER REVIEW FOR:	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Average barometer	29.58	29.58	29.64	29.65	29.65	29.64	29.67	29.62	29.66	29.66	29.64	29.97	29.62	29.66
Highest barometer	30.14	30.14	30.30	30.14	30.12	30.14	30.34	30.22	30.14	30.14	30.14	30.64	30.62	30.13
Lowest barometer	29.23	29.00	28.97	29.08	29.19	29.30	29.21	28.98	28.99	28.99	29.08	29.62	29.04	29.94
Range of barometer	1.14	1.14	1.32	1.11	.88	.85	1.13	1.24	1.11	1.11	1.06	1.12	1.01	1.19
Average temperature	64.0	63.3	63.3	61.2	62.1	60.2	61.5	60.8	63.2	63.2	64.4	64.5	63.2	61.5
Highest temperature	108.0	110.5	110.0	108.0	103.0	105.0	107.0	107.0	108.0	108.0	109.0	109.0	111.0	110.0
Lowest temperature	32.0	25.0	25.0	26.0	31.0	25.0	19.0	22.0	33.0	33.0	27.3	17.5	26.0	22.0
Range of temperature	85.5	85.5	85.0	82.0	72.0	80.0	88.0	85.0	75.0	75.0	81.5	91.5	85.0	88.0
Greatest monthly range of temp.	54.0	58.0	54.0	53.5	53.0	57.0	58.0	57.0	56.0	54.4	70.4	55.1	61.0	57.0
Least monthly range of temp.	34.0	25.0	36.0	27.5	32.5	30.0	32.0	35.5	32.5	34.5	35.9	25.6	26.0	32.0
Average maximum temperature	86.9	89.2	89.2	86.7	86.0	83.7	87.2	87.0	79.3	76.2	75.6	75.1	75.0	73.3
Average minimum temperature	41.4	41.3	41.3	39.8	41.1	39.5	39.8	49.7	52.8	52.4	51.4	52.2	51.4	49.7
Average range of temperature	45.5	47.8	47.8	46.9	44.9	44.2	47.4	44.0	44.8	46.6	50.0	46.2	47.0	23.7
Average humidity	53.2	52.5	52.5	51.4	55.1	58.0	55.1	59.3	57.5	55.3	47.0	52.5	56.0	58.0
Average dew point	N.	N.	N.	N.	N.	N.	41.5	43.5	45.2	42.8	39.5	41.7	42.0	43.0
Prevailing direction of wind	N.	N.	N.	N.	N.	N.	N. & S.	N. & S.	S.	N.	N.	N.	N.W.	N.W.
Total precipitation	8.54	49.01	33.64	26.58	24.33	21.82	13.76	23.06	29.63	17.21	13.60	24.94	32.87	25.60
Total velocity of wind	28,405	70,220	a	69,379	49,098	45,879	54,948	58,146	51,924	54,680	63,706	57,769	59,769	62,122
Maximum velocity of wind	30	46	52	60	42	40	36	48	44	50	45	45	44	48
Direction at time of max. velocity	N.	S.E.	S.	S.E.	S.	S.	S.	S.	S.	S.E.	N. & S.	N. & S.	S.E.	S.E.
Clear days	128	232	207	230	204	215	261	225	223	212	213	207	205	218
Fair days	32	72	90	74	103	89	87	84	96	91	98	89	70	89
Cloudy days	24	61	68	58	58	43	37	53	46	59	54	68	90	56
Days of precipitation	27	79	83	66	72	69	44	71	70	63	57	91	97	79
Thunder and lightning	a	a	a	a	a	7	7	7	7	3	5	10	5	4
Days temperature above 90°	69	93	84	71	59	60	94	53	77	89	99	88	108	86
Days temperature below 32°	0	12	16	26	1	17	33	15	0	7	12	14	10	26

* Station opened July 1, 1877—six months, 1877. a No record. b Five months.

RAINFALL AT RED BLUFF, TEHAMA COUNTY, CAL.

This table is made up from the Signal Service records, and shows the total rainfall for each calendar year from 1878 to date, and the rainfall by seasons from 1877-78 to date; also the totals for each month, with the averages from the opening of the Signal Office on July 1, 1877, to date. Prepared by JOHN McLEAN, Observer Signal Corps:

YEAR.	Janu-ary.	Febru-ary.	March.	April.	May.	June.	July.	August.	Septem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	Total for Year.	Season of.	Total for Season.
1877	20.71	16.66	4.16	2.21	.89	none	.05	.03	none	1.35	3.13	3.98	48.96	1877-78	53.17
1878	3.13	3.67	5.39	2.12	2.18	none	none	none	spring.	1.56	1.68	.69	53.64	1878-79	21.17
1879	2.01	1.66	1.70	7.05	1.04	none	none	none	spring.	.48	6.05	9.95	26.53	1879-80	30.26
1880	9.40	2.79	.51	1.83	.79	none	none	none	spring.	.08	.14	12.85	24.93	1880-81	28.90
1881	2.81	3.94	2.67	2.12	.33	.15	spring.	none	1.07	1.61	.73	5.69	21.92	1881-82	21.12
1882	.87	.39	2.60	1.96	2.96	none	none	none	.49	2.80	5.07	1.44	13.76	1882-83	18.58
1883	3.55	2.21	7.81	4.31	.18	none	none	none	1.04	2.68	.74	.52	28.06	1883-84	24.01
1884	1.84	1.19	spring.	.62	.64	1.37	none	none	.96	.90	.04	7.73	29.67	1884-85	14.69
1885	4.80	.18	1.31	4.12	.73	spring.	spring.	spring.	2.91	1.10	17.05	3.90	17.18	1885-86	35.15
1886	.57	5.21	1.13	1.76	.77	.26	spring.	spring.	none	none	1.52	3.94	13.60	1886-87	15.74
1887	4.08	2.17	3.47	.53	.51	2.61	spring.	spring.	.33	spring.	4.32	2.92	24.94	1887-88	17.27
1888	.51	.71	6.83	1.11	2.04	.64	none	none	none	8.41	3.37	6.85	32.87	1888-89	23.41
1889	6.53	3.67	6.14	1.70	2.67	.11	none	none	1.55	.01	none	3.20	26.60	1889-90	41.85
1890														1890-91	*4.76

* Up to January 1, 1891.

Weather summary for the year 1890, at Willows, Cal. By A. W. SHERMAN, Observer:

MONTH.	Mean Maximum Temperature..	Mean Minimum Temperature..	Mean Monthly Temperature..	Highest Temperature	Lowest Temperature	Total Precipitation	Clear Days	Fair Days	Cloudy Days	Rainy Days	Light Frosts	Killing Frosts	Prevailing Wind Direction
January	46	36	41	55	28	4.52	9	8	14	9	5	4	S.E.
February	54	37	46	69	26	2.70	13	2	8	4	6	3	N.
March	62	41	51	72	28	4.74	14	2	15	9	4	2	S.
April	70	45	58	81	37	.62	9	8	13	2	0	0	N.
May	78	55	67	89	43	1.88	9	8	14	6	0	0	S.E.
June	88	57	73	101	43	.20	19	8	3	1	0	0	S.E.
July	94	60	77	107	54	.00	27	3	1	0	0	0	N.
August	93	61	77	97	55	.68	28	2	1	0	0	0	S.
September	83	60	72	86	56	.00	23	3	4	0	0	0	S.
October	81	48	64	86	33	.00	23	8	0	0	0	0	N.
November	70	39	55	82	35	T.	16	10	4	0	0	0	N.
December	50	37	43	67	28	3.14	3	4	24	5	5	3	N.
For the year	72	48	60	86	39	19.49	198	66	101	37	20	12	N.

NOTE.—The temperature was low enough for frost in November, but the atmosphere was so dry there was no frost until December fourth.

COLUSA, COLUSA COUNTY, CAL.

The rainfall, etc., from Colusa was furnished by J. D. McNARY. The table gives the rainfall by seasons from 1872-73 to date, and by months from 1881 to date:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1872														1872-73	38.46
1873														1873-74	11.28
1874														1874-75	19.02
1875														1875-76	19.79
1876														1876-77	9.20
1877														1877-78	33.34
1878														1878-79	13.98
1879														1879-80	19.21
1880														1880-81	16.96
1881	3.70	2.27	2.60	1.42	.34	none	none	none	1.19	none	.43	2.51	12.46	1881-82	22.62
1882	1.51	2.56	2.50	1.27	.04	.65	none	none	.23	1.10	1.73	.69	12.97	1882-83	11.66
1883	1.07	2.37	2.36	.79	3.23	none	none	none	.68	.68	.11	.10	9.89	1883-84	29.75
1884	4.32	2.30	6.70	2.97	.12	none	none	none	.58	1.06	none	5.30	25.74	1884-85	11.69
1885	2.04	.56	3.85	1.22	none	.65	none	none	.02	.79	7.69	3.98	17.22	1885-86	21.64
1886	4.57	.20	.64	3.85	.10	none	none	none	none	.65	none	1.25	11.06	1886-87	11.37
1887	.42	5.97	1.17	1.91	none	none	none	none	none	none	.60	1.90	11.97	1887-88	10.65
1888	3.32	1.03	2.46	.30	.60	.39	none	none	.74	none	3.83	5.69	18.41	1888-89	17.77
1889	.30	.43	5.38	.33	.72	.37	none	none	none	6.35	2.64	7.75	24.25	1889-90	35.00
1890	6.27	3.03	4.08	1.43	2.15	1.25	none	.04	.77	none	none	2.94	22.01	1890-91	*3.71

Average seasonal precipitation for eighteen years is 19.35 inches.

* Up to January 1, 1891.

THE TEMPERATURE, RAINFALL, ETC., AT MARYSVILLE, IN 1890.
"Appeal" Office, Observer.

The year just closed was chiefly remarkable, in respect to weather, for the unusually large number of rainy days in the first three months of the year, and for the uncommonly gloomy weather in December. The winter of 1889-90 will long be remembered as one of the most disagreeable in the history of Marysville. The following table gives a summary of the local weather record. Despite the bad beginning of the year, it will be observed that the total number of clear days was two hundred and twenty-four, which compares very favorably with the average for Mediterranean health resorts:

Summary for 1890.

MONTH.	Highest Tem- perature	Lowest Tem- perature	Average Tem- perature	Clear Days	Fair Days	Cloudy Days	Days on which Rain fell	Rainfall
January	54	28	41.4	10	6	15	15	5.59
February	64	29	46.7	10	5	13	8	4.71
March	71	36	53.0	14	8	9	15	4.78
April	83	44	60.7	21	7	2	2	1.83
May	96	48	68.1	19	8	4	4	2.44
June	94	47	69.6	29	1	0	1	.09
July	101	57	75.9	30	0	1	0	—
August	94	57	75.6	28	0	5	0	—
September	92	56	73.0	16	7	7	2	.91
October	85	42	63.0	22	9	0	0	—
November	75	38	53.4	22	7	1	0	—
December	58	34	43.9	5	8	18	7	2.95
For 1890	101	28	60.4	224	66	75	54	23.30
For 1889	103	31	62.0	249	52	64	68	32.13

WHEATLAND, CAL.

Weather summary for the year 1890, at Wheatland. By WILLIAM
BARD, Observer:

MONTH.	Mean Maximum Temperature	Mean Minimum Temperature	Mean Monthly Temperature	Highest Temper- ature	Lowest Temper- ature	Total Precipita- tion	Rainy Days	Prevailing Wind Direction
January	47.0	34.8	40.9	57	27	4.75	19	S.
February	52.8	38.3	45.6	66	28	4.17	8	S.E.
March	59.2	42.6	50.9	69	36	4.45	16	S.E.
April	69.1	47.8	58.4	83	39	1.40	3	S.E.
May	76.0	54.5	65.2	102	45	1.84	4	S.E.
June	83.7	55.0	69.3	98	45	—	—	S.E.
July	90.0	59.3	74.6	106	52	—	—	S.E.
August	90.8	59.9	75.3	99	53	—	—	S.E.
September	86.8	56.2	71.5	97	51	1.01	2	S.E.
October	79.0	47.9	63.4	89	42	—	—	N.
November	68.9	38.7	53.8	84	35	—	—	N.
December	48.5	35.9	42.2	61	30	2.19	8	N.
For the year	70.9	47.5	59.2	*106	†27	19.81	60	S.

* In July. † In January.

WEST BUTTE, SUTTER COUNTY, CAL.

The report of rainfall at West Butte, Sutter County, was furnished by A. S. Noyes, and covers a period from November, 1879, to date:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Season of Year.	Total for Season of Season.
1879														
1880	62	75	75	5.88	.62	none	none	none	none	none	2.38	2.25	14.00	1879-80
1881	3.69	1.38	75	1.06	none	none	none	none	.31	1.12	none	5.38	10.63	1880-81
1882	1.88	2.31	2.57	1.19	.50	none	none	none	.25	.88	.38	2.00	12.45	1881-82
1883	1.75	1.19	3.06	.88	3.66	none	none	none	.62	.81	2.62	.25	12.45	1882-83
1884	3.81	2.12	6.50	3.75	.25	1.75	none	none	.57	1.00	none	.19	10.06	1883-84
1885	2.00	.50	.37	2.12	.18	.45	none	none	.18	.56	none	4.94	24.69	1884-85
1886	4.75	.70	1.50	4.19	.12	none	none	none	none	.50	.44	.67	17.46	1885-86
1887	4.50	6.06	.82	2.20	none	none	none	none	none	none	.75	1.50	11.83	1886-87
1888	3.56	1.12	2.67	.30	.36	.90	none	none	.75	none	3.25	6.00	18.30	1887-88
1889	.12	.36	5.78	.63	1.45	.50	none	none	none	4.75	3.00	7.37	23.96	1888-89
1890	5.45	2.59	4.14	1.59	2.02	.23	none	.04	.87	none	none	2.49	19.42	1889-90
														1890-91

Average precipitation by seasons for eleven years is 16.39 inches.

*Up to January 1, 1891.

GRASS VALLEY, NEVADA COUNTY, CAL.

The rainfall that goes to make up the following table for Nevada County was taken at Grass Valley, by Mr. W. LOUTZENHEIMER, beginning with January, 1879, to date:

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Season of Year.	Total for Season of Season.
1873	4.01	12.50	1.39	2.32	2.56	none	none	none	none	.88	2.69	19.01	45.61	1872-73
1874	13.71	6.38	11.71	3.76	1.06	none	none	none	none	2.95	10.31	1.08	57.30	1873-74
1875	13.56	1.39	4.14	2.39	1.08	none	none	none	none	.57	16.89	7.44	50.24	1874-75
1876	12.01	10.75	12.47	2.80	1.23	.65	none	none	.06	8.72	.82	none	43.51	1875-76
1877	10.18	2.44	4.79	1.14	1.40	.74	none	none	none	1.21	3.73	1.74	27.42	1876-77
1878	15.74	17.76	10.18	2.78	.69	none	none	none	.68	2.09	2.54	.75	53.11	1877-78
1879	10.72	11.51	18.07	7.08	3.08	.30	none	.08	none	2.79	6.54	8.86	69.03	1878-79
1880	6.40	4.83	4.07	23.31	6.23	.09	none	none	none	.04	.30	22.69	67.96	1879-80
1881	19.20	8.50	3.33	1.85	.05	1.50	none	none	1.25	3.71	3.52	8.21	51.12	1880-81
1882	6.03	6.30	7.96	5.29	1.18	.05	none	none	1.88	7.88	4.78	2.83	44.61	1881-82
1883	3.05	2.97	9.25	2.38	5.77	none	none	none	1.44	3.03	1.48	2.31	31.68	1882-83
1884	7.30	10.27	13.98	10.98	1.00	2.30	none	none	.98	3.90	.05	23.39	79.06	1883-84
1885	3.65	1.76	.83	3.17	1.16	.50	none	none	2.65	none	19.27	6.36	38.75	1884-85
1886	12.40	1.43	4.83	11.38	1.09	none	none	none	none	1.66	.67	5.46	38.92	1885-86
1887	3.38	15.72	1.69	6.54	.64	.52	none	none	.26	none	1.38	6.85	36.98	1886-87
1888	11.81	2.59	5.22	.50	.38	2.21	.06	none	.50	none	4.03	7.94	35.24	1887-88
1889	.58	.97	11.93	3.56	7.36	none	none	none	none	12.00	8.37	19.25	63.80	1888-89
1890	13.64	10.02	13.69	8.52	3.10	.02	none	none	1.95	none	none	4.42	55.86	1889-90
1891														1890-91

*Up to January 1, 1891.

RAINFALL AT WOODLAND, YOLO COUNTY, SINCE 1873.

Taken from J. B. Elston's record, which is the standard gauge for Yolo County:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1873	1.25	2.84	.56	.18	none	none	none	none	none	.20	1.15	10.44	16.62	1872-73	10.22
1874	5.99	1.83	2.85	.64	.40	none	none	none	none	3.26	2.79	.16	17.42	1873-74	23.00
1875	5.22	.35	.66	none	.15	1.59	none	none	none	.44	3.87	2.49	14.77	1874-75	14.18
1876	4.40	4.35	4.24	1.40	.45	none	none	none	.17	3.37	.27	none	19.31	1875-76	22.30
1877	3.95	1.42	.77	.03	.53	none	none	none	none	.94	1.10	1.29	10.03	1876-77	10.51
1878	11.52	7.61	2.30	1.25	.68	done	none	none	.25	.34	.88	.01	24.84	1877-78	26.69
1879	2.62	3.25	4.48	2.40	1.70	none	none	none	none	.22	7.15	3.66	20.48	1878-79	16.23
1880	1.33	1.22	.97	6.84	.28	none	none	none	none	none	none	8.73	19.37	1879-80	16.57
1881	4.50	1.93	.97	1.39	none	.35	none	none	.50	.25	1.87	2.37	14.13	1880-81	17.87
1882	1.24	1.87	2.34	1.51	4.65	.07	none	none	.82	2.04	2.42	1.05	13.39	1881-82	12.25
1883	.91	.60	3.24	1.22	4.03	none	none	none	.54	1.04	.30	5.57	13.04	1882-83	16.75
1884	3.67	4.07	6.53	4.03	none	3.02	none	none	.22	1.61	none	2.73	15.40	1883-84	22.75
1885	1.62	.15	.15	1.50	none	none	none	none	.06	.05	none	1.39	13.64	1884-85	23.64
1886	5.81	none	1.71	4.14	none	none	none	none	none	.59	none	3.67	15.86	1885-86	13.07
1887	.88	7.56	2.80	1.90	none	none	none	none	none	none	6.25	4.51	19.84	1886-87	12.79
1888	3.88	.97	6.14	.84	2.01	none	none	none	.66	none	3.54	8.16	27.34	1887-88	21.42
1889	.19	.49	3.42	.95	1.68	none	none	none	none	5.54	none	3.04	19.18	1888-89	32.96
1890	5.30	4.37							.42	none	none			1889-90	
1891														1890-91	*3.46

Average precipitation for eighteen seasons is 18 inches.

* Up to January 1, 1891.

WATER AT IOWA HILL, PLACER COUNTY, CAL.

Summary of the weather record kept by C. F. MacV, at Iowa Hill, Placer County, for the year 1890. Altitude, 2,825 feet above sea level:

MONTH.	HIGHEST TEMPERATURE.			LOWEST TEMPERATURE.			MEAN TEMPERATURE.			Killing Frosts...		Prevailing Wind.
	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Light Frosts...		
January	41	51	43	22	33	27	31.12	40.16	34.13	7	19	S.
February	62	67	52	22	34	28	37.18	48.07	39.00	3	11	S.
March	50	63	50	31	37	33	42.10	53.57	43.74	1	3	S.
April	62	83	63	41	41	42	50.30	67.13	52.16	0	0	(S. to S.W. day, N. to N.E. night.)
May	76	91	76	41	45	40	58.71	73.84	59.61	0	0	N. to N.E.
June	77	94	77	48	58	47	62.66	79.33	63.23	0	0	N. to N.E.
July	80	101	84	62	75	61	71.61	80.39	71.77	0	0	N. to N.E.
August	76	96	77	56	81	62	70.21	89.22	72.13	0	0	N. to N.E.
September	72	93	75	54	67	55	75.23	84.70	68.47	0	0	N. to N.E.
October	64	86	69	45	54	45	54.55	74.34	58.68	0	0	N. to N.E.
November	62	82	64	36	53	43	51.23	71.56	54.76	1	0	S. to S.W.
December	52	67	57	33	40	38	43.80	58.42	46.13	3	1	S. to S.W.
For the year	63.67	81.67	65.88	40.91	50.67	45.41	53.23	69.29	55.31	15	34	-----

Annual mean temperature at above hours, 61.78°.

RAINFALL AT IOWA HILL, PLACER COUNTY, CAL.

Record of rainfall kept by C. F. MACY, from January 1, 1879, to June 1, 1885, at Strawberry Flat, near Iowa Hill; altitude, 3,225 feet; and from June 1, 1883, to January 1, 1891, at Iowa Hill, Placer County; altitude, 2,825 feet above sea level:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1879	12.50	12.50	18.25	7.87	3.25	.25				3.50	3.63	13.35	75.10	1879-80	64.58
1880	5.00	6.10	7.88	13.87	6.25					.75	.75	20.80	66.40	1880-81	63.87
1881	20.75	10.50	4.62	3.15	.13	2.12			2.50	4.25	3.90	10.56	62.48	1881-82	57.23
1882	8.92	6.80	10.43	7.59	1.55	.73			.85	8.50	6.63	2.69	54.19	1882-83	48.30
1883	4.37	4.24	10.63	3.67	7.22				.75	4.94	2.02	3.75	41.19	1883-84	64.21
1884	8.05	11.26	16.50	13.22	1.60	2.52			1.60	2.43		24.22	81.40	1884-85	38.02
1885	3.03	1.48	6.68	2.93	1.05	1.60			1.20		15.82	6.14	32.98	1885-86	36.25
1886	10.89	.68	6.46	12.19	1.87	.07			.48	2.28	.96	6.52	40.92	1886-87	37.68
1887	3.61	15.61	2.23	6.55	.78			.05	.35		3.78	8.14	36.27	1887-88	32.00
1888	11.73	2.41	4.59	1.47	1.14	2.60	.06			9.20	8.49	21.04	64.82	1888-89	38.36
1889	.58	.71	12.12	4.20	8.26	.22			2.29	2.64		7.34	64.58	1889-90	71.16
1890	20.87	10.74	14.12	3.02	3.48	.08								1890-91	*12.27

Average seasonal precipitation, 50.06 inches.

* Up to January 1, 1891.

KEELER, INYO COUNTY, CAL.

Annual meteorological review from date of opening station in 1885, and including the year 1890. By HERBERT E. WILKINSON, Observer, Postal Service:

	*1885.	1886.	1887.	1888.	1889.	1890.
Barometer	26.284	26.306	26.303	26.290	26.29	26.31
Barometer	26.729	26.748	26.770	26.870	26.65	26.78
Barometer	25.850	25.709	25.730	25.750	25.72	25.74
Barometer	.879	1.039	1.040	1.120	.93	1.04
Barometer	64.6	60.4	60.8	61.0	62.3	60.3
Barometer	104.7	103.4	99.2	99.8	107.0	103.0
Barometer	31.4	24.3	22.0	11.8	21.0	16.0
Barometer	73.3	79.1	77.2	88.0	86.0	87.0
Barometer	53.1	50.0	56.3	47.5	60.0	55.0
Barometer	31.2	32.2	37.6	26.3	34.0	32.0
Barometer	43.1	42.8	44.6	41.2	43.0	44.0
Barometer	76.7	72.0	71.8	71.9	73.0	71.4
Barometer	53.4	49.9	49.1	50.4	51.6	49.3
Barometer	46.3	42.4	36.9	40.4	39.0	38.2
Barometer	41.6	34.8	31.1	33.2	34.0	32.3
Barometer	S.W.	S.W.	S.W.	S.	S.	S.S.E.
Barometer	38,820	50,751	55,563	54,545	61,237	58,067
Barometer	45	40	44	42	48	48
Barometer	S.	W.	W.	W.	N.	W.
Barometer	2.39	1.94	5.04	5.66	2.00	3.74
Barometer	236	291	254	227	259	261
Barometer	50	65	91	111	74	78
Barometer	11	9	20	28	32	26
Barometer	22	16	29	35	25	20
Barometer	70	83	68	69	93	71
Barometer	1	29	41	27	31	42

For ten months; station opened March 1, 1885.

Highest, lowest, and mean temperature at Keeler, California

MONTH.	1885.	1886.	1887.	1888.
January—Highest		67.0	63.5	58.0
Lowest		25.6	24.7	11.8
Mean		42.8	43.1	35.3
February—Highest		73.0	62.7	63.8
Lowest		31.2	22.0	30.0
Mean		50.8	40.0	47.8
March—Highest	73.0	71.0	77.1	72.5
Lowest	33.6	26.8	33.0	27.0
Mean	54.3	47.5	56.5	50.6
April—Highest	77.8	80.3	81.2	85.8
Lowest	36.6	35.2	32.2	39.0
Mean	57.8	55.6	57.4	63.4
May—Highest	95.6	91.4	93.3	87.8
Lowest	42.5	45.6	37.0	40.7
Mean	68.0	68.4	66.7	66.4
June—Highest	94.4	98.4	99.2	96.0
Lowest	46.3	48.4	43.6	48.5
Mean	69.7	75.8	73.9	73.9
July—Highest	104.7	100.4	98.6	98.0
Lowest	60.7	58.3	61.0	54.1
Mean	80.1	79.9	81.1	79.3
August—Highest	102.7	103.4	98.8	90.8
Lowest	62.2	65.1	53.4	60.0
Mean	81.0	81.5	79.7	80.5
September—Highest	97.2	94.0	91.6	96.1
Lowest	49.7	53.4	53.6	58.7
Mean	74.1	74.1	72.3	78.2
October—Highest	90.4	81.4	90.7	86.1
Lowest	46.8	33.6	45.3	47.0
Mean	64.4	58.2	63.4	64.4
November—Highest	78.6	68.1	70.0	70.0
Lowest	36.2	24.3	28.1	32.4
Mean	51.7	45.1	52.2	49.4
December—Highest	62.6	62.4	65.6	56.1
Lowest	31.4	30.2	23.3	29.8
Mean	45.4	44.7	42.9	42.8
Annual mean		60.4	60.8	61.0

Annual average temperature for five years, 61°.
Station opened March 1, 1885.

The precipitation by months, years, and seasons, at Keeler County, California, beginning with March, 1885, and ending with January 31, 1891:

MONTH.	1885.	1886.	1887.	1888.	1889.
January		.49	T.	.70	.04
February		.14	.93	1.21	T.
March	.12	.60	.00	.30	.62
April	.82	.40	1.14	.12	.12
May	.00	.00	.04	.30	.06
June	.08	.00	T.	.20	.01
July	.00	.14	.52	.17	.00
August	.11	.08	.00	.10	T.
September	.00	.00	1.08	.06	.08
October	.25	.01	.84	.00	.56
November	.65	.08	.01	1.68	.06
December	.36	.00	.48	.82	.56
Total annual		1.94	5.04	5.66	2.00

Total precipitation for each season was as follows:

Season of 1885-86	3.00 inches.
Season of 1886-87	2.42 inches.
Season of 1887-88	5.76 inches.
Season of 1888-89	3.58 inches.
Season of 1889-90	1.98 inches.
Season of 1890-91, to January 1, 1891	2.43 inches.

The average precipitation for the first five seasons, July first of one year to June thirtieth of the next, was 3.35 inches. The average precipitation for the five years (twelve calendar months from January to December), 3.68 inches. This shows Keeler to be quite a dry place, but so dry as has been supposed.

WEATHER AT GEORGETOWN, EL DORADO COUNTY, CAL.

Weather summary for the year 1890, at Georgetown, El Dorado County, California. By C. M. FITZGERALD, of the California Water and Mining Company:

MONTH.	Mean Maximum Temperature..	Mean Minimum Temperature..	Mean Monthly Temperature..	Highest Temperature	Lowest Temperature	Total Precipitation	Clear Days	Fair Days	Cloudy Days	Rainy Days
January	39.4	27.6	33.5	50.0	18.0	19.90	11	5	15	16
February	47.9	32.8	40.3	63.4	18.0	3.96	12	4	12	11
March	53.6	37.3	47.0	65.0	29.0	14.70	12	3	16	16
April	65.1	43.4	54.2	78.0	34.0	3.86	21	3	6	6
May	68.3	49.4	59.3	89.3	38.0	4.66	20	4	7	6
June	76.0	50.8	63.4	89.0	38.0	.10	30			
July	89.0	60.4	74.7	98.4	52.0		31			
August	86.9	59.9	72.9	93.8	49.4		31			
September	81.0	57.4	69.2	88.6	49.5	3.00	22	5	3	4
October	70.7	48.5	59.6	82.0	37.5		28	3		
November	67.1	44.9	56.0	77.2	32.0		26	4		
December	55.6	39.2	47.4	65.5	29.0	7.65	18	3	10	6
For the year	66.7	45.9	56.4	78.3	35.3	62.83	262	34	69	66

First killing frost on seventh of November, 1890.

STATE AGRICULTURAL SOCIETY.

The rainfall at Georgetown, El Dorado County, was furnished by C. M. FITZGERALD, of the California Water and Mining Company, and extends from November, 1872, to date:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for year.	Season of	Total for Season.
1872	4.08	13.05	3.05	3.11	1.12	none	.08	none	none	.61	4.80	18.72	41.20	1873-74	63.67
1873	16.66	8.04	13.87	5.80	1.82	2.06	none	none	none	3.86	14.60	16.60	65.58	1874-75	46.81
1874	17.87	6.07	6.97	.81	2.03	2.06	none	none	none	1.30	24.12	1.24	66.58	1875-76	81.24
1875	13.09	9.97	14.54	4.78	1.22	none	.77	none	none	11.47	.80	none	66.64	1876-77	41.25
1876	12.44	2.14	7.78	1.74	3.87	.24	none	none	none	1.03	4.80	1.97	65.61	1877-78	61.31
1877	16.21	22.78	10.92	2.69	.99	.12	none	none	.68	2.56	2.66	.48	60.87	1878-79	60.96
1878	11.24	12.41	17.57	9.65	3.39	.34	none	none	none	3.85	6.25	11.73	76.43	1879-80	70.49
1879	5.47	6.00	5.50	25.63	5.97	none	none	none	none	.18	.37	22.67	71.79	1880-81	65.82
1880	20.83	12.85	3.84	2.40	4.0	2.28	none	none	2.02	4.23	3.30	10.32	62.47	1881-82	54.13
1881	8.59	6.88	10.44	7.11	2.06	.18	none	none	.16	7.75	7.00	3.31	52.48	1882-83	45.94
1882	4.70	3.08	8.73	3.87	7.34	none	none	none	1.60	4.10	1.94	3.50	38.86	1883-84	72.65
1883	7.53	13.80	19.94	16.07	1.52	3.65	none	.01	.80	3.54	33.73	99.62	1884-85	49.99	
1884	4.37	.82	.24	3.98	.19	2.28	.03	none	1.16	none	20.77	7.03	40.87	1885-86	73.08
1885	18.32	1.16	7.75	15.04	1.76	.06	none	none	none	3.43	1.79	6.90	56.21	1886-87	42.12
1886	3.36	15.79	2.40	6.54	.93	.18	none	none	.53	none	1.44	7.66	38.83	1887-88	83.51
1887	12.59	2.79	5.47	1.05	.38	1.56	none	none	.41	none	4.67	7.99	36.95	1888-89	93.47
1888	.66	.68	12.29	2.77	7.07	.25	none	none	none	10.45	9.70	22.94	66.81	1889-90	95.27
1889	19.90	8.96	14.70	3.86	4.66	.10	none	none	3.00	none	none	7.65	62.83	1890-91	*10.65

Average seasonal precipitation for seventeen years, 58.30 inches. It will be seen that a large amount of rain and melted snow was measured during that memorably wet season of 1889-90—more than was ever known since records were kept by the Observer at Georgetown.

* Up to January 1, 1891.

RAINFALL AT PLACERVILLE, EL DORADO COUNTY, CAL.

The rainfall record at Placerville, El Dorado County, from October, 1879, to December, 1887, was furnished by SAMUEL HALE, Superintendent of the El Dorado Water and Deep Gravel Mining Company, after which time, by Mr. RICHARD ROWLAND, Superintendent. Records were also kept from February, 1874, to February, 1877. The total for those years was, for eleven months in 1874, 33.23 inches; 1876, 44.84 inches; 1876, 39.21 inches; January and February, 1877, gave 11.06 inches.

YEAR.	Janu-ary.	Febru-ary.	March.	April.	May.	June.	July.	August.	Septem-ber.	Octo-ber.	Novem-ber.	Decem-ber.	Total for Year.	Season of.	Total for Season.
1879	4.38	5.81	4.66	17.52	3.96	none	none	none	none	8.47	5.28	7.53	54.19	1879-80	52.60
1880	15.53	7.01	3.38	2.36	sprin.	1.89	sprin.	none	1.08	2.80	2.87	16.94	54.19	1880-81	48.04
1881	6.71	5.15	9.30	5.53	1.19	.13	sprin.	none	.98	5.72	4.94	7.70	44.62	1881-82	42.46
1882	3.74	2.58	6.88	3.54	6.25	none	sprin.	none	1.67	3.38	1.67	1.98	41.58	1882-83	36.56
1883	6.06	11.56	14.46	11.82	1.60	2.51	sprin.	.03	.85	2.47	.10	2.65	32.34	1883-84	57.36
1884	4.15	.97	.53	3.32	.27	1.42	sprin.	none	.55	none	15.97	5.22	74.11	1884-85	36.56
1885	13.03	1.16	5.22	11.75	1.24	.50	sprin.	none	none	1.42	.91	5.02	40.24	1885-86	54.63
1886	3.18	14.18	2.09	6.71	.53	.28	none	sprin.	.88	sprin.	5.98	8.34	36.37	1886-87	33.32
1887	11.27	2.39	5.26	.91	1.10	.50	none	sprin.	.58	sprin.	7.77	7.06	36.39	1887-88	31.83
1888	1.03	.86	9.78	1.93	8.05	.16	none	sprin.	none	9.07	sprin.	18.18	56.83	1888-89	35.77
1889	14.57	7.46	13.41	3.51	3.61	none	none	sprin.	1.64	sprin.	sprin.	6.89	51.09	1889-90	63.77
1890														1890-91	* 8.53

The average seasonal rainfall for eleven years is 44.81 inches.

* Up to January 1, 1891.

WEATHER AT PLACERVILLE, EL DORADO COUNTY, CAL.

Weather summary for the year 1890 at Placerville, situated well up the foothills. RICHARD ROWLAND, Observer:

MONTH.	Mean Maximum Temperature	Mean Minimum Temperature	Mean Monthly Temperature	Highest Temperature	Lowest Temperature	Total Precipitation	Clear Days	Fair Days	Cloudy Days
January	46.4	28.7	40.1	57	14	14.57	6	2	23
February	52.9	31.5	43.0	68	16	7.46	9	5	14
March	59.5	37.1	49.2	68	26	13.41	6	4	21
April	65.9	42.8	56.5	77	33	3.51	14	8	8
May	71.7	48.1	64.1	91	38	3.61½	15	2	14
June	77.6	47.2	67.0	98	36		23		7
July	87.7	52.3	73.6	98	46		29	2	
August	86.2	49.8	72.4	94	46	sprin.	23	6	2
September	81.6	51.5	68.1	91	45	1.64	15	6	9
October	67.0	41.1	55.7	79	33	sprin.	22	6	3
November	63.4	33.5	48.5	73	27	sprin.	21	5	4
December	52.5	32.6	43.2	61	26	6.89	16	3	12
For the year	67.7	41.4	56.8	* 98	† 14	51.90	199	49	117

Mean of the maximum and minimum temperature for the year, 54.6°.

† In July. † In January.

LODI, SAN JOAQUIN COUNTY, CAL.

Weather summary for the year 1890, at Lodi, California. By EZRA W. WILSON, Observer:

MONTH.	Mean Maximum Temperature	Mean Minimum Temperature	Mean Monthly Temperature	Highest Temperature	Lowest Temperature	Total Precipitation
January	48.90	35.74	42.94	60	26	6.67
February	56.46	39.35	48.46	71	28	2.90
March	62.83	43.61	54.12	75	33	2.71
April	71.03	45.66	68.82	81	37	1.94
May	76.71	51.87	64.45	95	43	1.20
June	81.90	51.60	67.04	92	44	.00
July	88.96	55.83	73.44	103	49	.00
August	85.96	56.06	72.42	96	50	.00
September	82.63	54.36	70.09	92	50	.99
October	76.19	47.00	64.04	84	41	.00
November	67.83	36.90	55.11	80	33	.00
December	49.19	40.64	45.31	61	32	3.65
For the year	70.75	46.51	58.85	* 103	† 26	20.6

Yearly mean for a great number of years, 59.69°.

† In July. † In January.

The following table shows the amount of rainfall at Lodi, as
by J. D. HUFFMAN, Observer:

MONTH.	1887.	1888.	1889.
January.....		5.09	2.35
February.....		.44	2.35
March.....		2.69	5.80
April.....		.11	2.35
May.....		.61	2.35
June.....		.43	2.35
July.....		none	none
August.....		none	none
September.....		.88	none
October.....	none	none	5.80
November.....	.77	3.61	4.11
December.....	4.54	3.56	7.30
Total for twelve months.....		17.32	25.80

Total for season of 1887-88, 14.58 inches; 1888-89, 17 inches; 1889-90, 33.46 inches;
for season of 1890-91, up to January 1, 1891, 4.64 inches.

VACAVILLE, SOLANO COUNTY, CAL.

Weather summary for the year 1890, at Vacaville, Solano
Cal. By G. O. COBURN, Observer:

MONTH.	Mean Maximum Temperature..	Mean Minimum Temperature..	Mean Monthly Temperature..	Highest Temper- ature.....	Lowest Temper- ature.....	Amount of Rain- fall in inches.....
January.....	49.2	37.5	43.3	59	30	12.2
February.....	55.5	41.9	48.0	70	31	4.1
March.....	60.9	47.3	52.7	72	38	5.9
April.....	69.1	53.5	58.7	83	46	1.9
May.....	71.5	61.4	66.9	98	50	1.6
June.....	83.7	64.3	71.6	97	55	none
July.....	92.0	68.7	78.5	105	62	none
August.....	89.5	66.6	75.8	99	59	trace
September.....	86.6	62.1	72.5	100	56	0.3
October.....	80.8	55.1	66.4	89	46	trace
November.....	72.6	46.0	57.6	83	38	4.5
December.....	50.7	40.0	61.2	68	32	4.5
For the year.....	74.84	53.78	61.2	85.25	45.25	31.5

Furnished by Mr. A. V. STEVENSON, and shows a record of rainfall by months, years, and seasons, from 1860 to date:

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1890.....	8.48	2.28	2.73	8.26	7.58	1.78	none	none	none	none	.07	21.25	47.43	1879-80	36.81
1891.....	15.61	4.68	1.13	2.36	none	none	none	none	none	none	1.98	5.86	31.25	1890-91	45.00
1882.....	2.76	3.88	4.17	2.37	1.19	none	none	none	1.10	3.11	3.77	1.15	22.00	1881-82	20.44
1883.....	2.45	2.11	6.26	2.03	5.63	none	none	none	none	2.24	.49	1.63	22.84	1882-83	27.61
1884.....	6.02	7.19	11.45	7.48	.24	none	none	none	.41	1.20	none	16.18	50.17	1883-84	36.74
1885.....	1.89	.23	.28	1.54	none	none	none	none	none	1.30	15.98	6.68	23.95	1884-85	21.78
1886.....	8.74	.17	1.32	4.84	.05	none	none	none	none	.27	.14	2.26	17.79	1885-86	37.08
1887.....	1.84	9.40	1.06	2.65	none	none	none	none	none	none	1.01	5.62	21.24	1886-87	17.12
1888.....	6.84	.45	4.21	.08	.04	.11	none	none	.71	none	5.77	5.35	23.06	1887-88	18.02
1889.....	.44	.98	7.92	.80	3.04	.15	none	none	none	7.98	4.26	12.48	33.05	1888-89	25.16
1890.....	11.74	5.49	6.74	.86	1.40	none	none	trace	.23	.94	none	2.92	23.57	1889-90	53.29
1891.....														1890-91	*4.56

* Up to January 1, 1891.

NAPA CITY, CAL.

Weather summary for the year 1890, at Napa City. By W. H. MARTIN, Observer:

MONTH.	Mean Maximum Temperature	Mean Minimum Temperature	Mean Monthly Temperature	Highest Temperature	Lowest Temperature	Total Precipitation	Clear Days	Fair Days	Cloudy Days	Rainy Days	Prevailing Wind - Direction
January	44.87	34.00	39.43	53.0	26	9.40	8	8	15	21	S.E.
February	50.82	36.78	43.80	60.0	30	6.36	6	14	8	10	S.
March	55.45	42.38	48.91	64.0	32	5.46	10	7	14	15	S.
April	62.70	45.18	53.93	76.0	38	1.68	14	12	10	6	S.
May	69.48	50.35	59.91	91.0	42	2.23	21	11	6	4	S.
June	73.60	50.86	62.23	86.0	41	.00	24	9	0	0	S.
July	75.77	52.07	63.92	87.5	46	T.	24	7	0	0	S.
August	73.87	52.39	63.13	86.0	47	.43	24	4	0	3	S.
September	71.67	50.53	61.10	80.0	44	.00	24	7	0	0	S.
October	70.00	46.74	58.37	79.0	38	.00	24	4	0	0	S.
November	63.00	40.33	51.66	72.0	34	.00	14	15	1	6	S. & N.
December	47.55	34.51	41.03	56.0	30	4.13	2	22	7	0	S. & N.
For the year	63.23	44.78	53.95	*91.0	+26	29.69	174	123	68	64	S.

* In May. † In January.

The following table of rainfall was furnished by OSCAR GALL, and shows a record of rainfall by months, years, and seasons, from July, 1874, to date:

Year.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Season of Year.	Total for Season of Year.
1874	3.15	3.39	3.41	none	1.45	1.80	none	none	none	3.00	31.54	4.40	36.38	1874-75 50.54
1875	3.76	9.31	1.44	2.21	1.46	.28	none	.08	none	2.97	12.15	6.33	46.32	1875-76 55.23
1876	3.00	5.39	3.94	1.18	1.80	.78	.20	none	none	3.13	5.33	1.16	46.32	1876-77 51.22
1877	33.23	29.53	13.83	8.14	none	none	none	none	none	2.79	2.06	6.22	33.23	1877-78 52.30
1878	7.78	11.33	16.43	5.02	2.04	none	none	.40	none	1.73	15.82	15.47	88.17	1878-79 52.84
1879	6.85	3.53	4.06	16.59	3.13	none	none	none	none	.24	none	23.38	77.72	1879-80 57.27
1880	19.99	13.88	2.97	2.51	3.13	1.83	none	none	.75	3.10	.93	13.08	57.77	1880-81 65.74
1881	6.56	11.78	3.01	4.04	.84	.13	none	none	.57	8.64	5.39	3.49	44.45	1881-82 44.20
1882	6.57	1.40	9.67	3.25	6.50	none	none	none	2.00	2.32	4.49	1.38	33.58	1882-83 45.48
1883	7.16	7.44	10.76	11.79	.80	4.40	none	none	.80	1.85	1.85	19.17	66.02	1883-84 48.54
1884	6.31	3.58	1.45	2.19	none	.33	none	none	none	1.14	18.92	5.98	39.45	1884-85 58.00
1885	14.62	8.25	3.56	8.94	2.04	none	none	none	none	1.86	2.26	8.12	40.65	1885-86 58.00
1886	2.61	8.35	1.72	3.48	.17	.12	none	none	.60	none	2.45	4.11	23.61	1886-87 27.69
1887	10.79	2.55	4.61	none	.90	2.49	.22	none	.58	none	4.95	7.71	34.80	1887-88 28.46
1888	.97	1.77	8.35	1.54	3.17	.20	none	none	.12	10.92	4.02	13.07	44.13	1888-89 59.07
1889	12.44	3.75	9.87	3.44	1.51	.13	none	none	.19	.10	none	6.21	37.64	1889-90 *65.50

Average seasonal rainfall for sixteen years is 49.65 inches.

* Up to January 1, 1891.

SONOMA, SONOMA COUNTY, CAL.

The following summary of the weather for the season of 1889-90, at Sonoma, Sonoma County, California, was furnished by ROBERT HALL:

MONTH.	Prevailing Wind —Direction—	S.S.E. S.E. S.W. S.E. S.W. S.W. S.W. S.W.	Rainy Days	Cloudy Days	Fair Days	Clear Days	Total Precipita- tion	Lowest Temper- ature	Highest Tem- perature	Mean Monthly Temperature	Mean Minimum Temperature	Mean Maximum Temperature
1889—October		S.S.E.	9	6	4	12	9.09	42	82	62	50	75
November		S.E.	8	6	4	11	4.36	35	78	52	45	58
December		S.W.	22	5	1	4	11.69	31	62	46	36	55
1890—January		S.E.	19	5	5	2	12.87	29	62	50	45	55
February		S.E.	7	5	6	10	6.02	25	74	49	37	61
March		S.W.	11	6	7	7	6.16	36	71	52	42	63
April		S.W.	5	4	10	11	1.80	49	82	56	47	65
May		W. to S.W.	4	7	8	17	1.12	47	84	59	51	67
June		S.W.	0	0	8	22	—	47	88	64	52	75
July		S.W.	0	0	9	22	—	48	93	66	51	81
August		S.W.	0	1	18	12	—	44	90	66	54	77
September		S.W.	0	6	3	21	—	43	92	66	50	82
For the season		S.W.	85	50	79	151	53.11	+25	+94	57.3	46.8	67.8

There were eight light frosts in February, and one in December, 1889.

*In May. †In February.

RAINFALL AT SONOMA, CAL.

The following is a summary of the rainfall at Sonoma, by seasons:

MONTH.	Inches.	MONTH.	Inches.
November	13.40	1888—June	.73
December	4.46	July	.01
January	7.84	Total	20.68
February	.28	1888—September	.86
March	1.38	October	.00
April	7.09	November	5.02
Total	34.45	December	8.30
October	.95	1889—January	.90
November	.27	February	.79
December	2.36	March	8.84
January	1.94	April	.68
February	11.77	May	2.68
March	.93	June	.13
April	2.53	Total	28.20
Total	20.75	1889—October	9.09
September	.25	November	4.36
October	.00	December	11.69
November	2.08	1890—January	12.87
December	4.97	February	6.02
January	5.78	March	6.16
February	.70	April	1.80
March	4.55	May	1.12
April	.19	Total	53.11
May	1.42		

The average precipitation for the five seasons since 1885-86 is 31.44 inches.

RAINFALL AT SAN FRANCISCO, CAL.

The rainfall from 1849 to date, from THOMAS TENNENT's and SIGNAL OFFICE records:

Year.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1849	8.34	1.77	4.53	4.46	none	none	none	none	none	3.14	8.96	6.20	17.40	1849-50	33.10
1850	.72	.54	1.94	1.23	.67	none	none	none	.33	none	.92	1.06	15.56	1850-51	7.40
1851	.58	1.14	6.68	2.26	.32	none	none	none	1.03	.21	2.12	7.10	15.56	1851-52	18.44
1852	3.92	1.42	4.86	5.37	.35	none	none	none	none	.80	5.81	13.20	27.29	1852-53	35.23
1853	3.88	8.04	3.51	3.12	.02	none	none	.04	.46	.12	2.28	2.52	21.14	1853-54	23.87
1854	3.67	4.77	4.64	5.00	1.88	none	none	.01	.15	2.41	.84	5.76	22.37	1854-55	23.68
1855	9.40	.50	1.60	2.94	.76	none	none	none	none	none	.67	3.75	26.39	1855-56	21.66
1856	2.45	8.59	1.62	none	.02	.03	.02	none	.07	.45	2.79	4.14	22.31	1856-57	19.88
1857	4.36	1.83	5.55	1.55	.34	.12	.05	.16	none	.93	3.01	6.14	23.46	1857-58	21.81
1858	1.28	6.32	3.02	2.77	1.55	none	.05	.02	none	2.74	.69	1.57	21.39	1858-59	22.22
1859	1.64	1.60	3.99	3.14	2.86	.09	none	.21	.08	.05	7.28	6.16	20.46	1859-60	22.27
1860	2.47	3.72	4.08	.51	1.00	.05	none	none	none	none	.19	9.54	25.52	1860-61	19.00
1861	24.36	7.53	2.20	1.04	.74	none	none	none	.02	none	4.10	2.35	38.51	1861-62	49.27
1862	3.63	3.19	1.52	1.57	.78	none	none	none	none	.40	.15	1.80	14.56	1862-63	13.08
1863	1.83	none	1.04	1.04	.78	none	none	none	.08	none	2.55	8.91	21.64	1863-64	10.08
1864	5.14	1.34	3.04	.94	1.46	none	none	none	.24	.26	6.68	14.06	36.28	1864-65	24.73
1865	10.88	2.12	3.04	.12	1.46	none	none	none	.01	none	3.85	15.16	30.64	1865-66	34.92
1866	5.16	7.20	1.53	2.36	none	none	none	none	.11	none	3.41	10.69	30.17	1866-67	38.84
1867	9.50	6.13	6.30	2.31	.03	.23	none	none	.04	.15	1.18	4.34	30.17	1867-68	21.35
1868	6.35	3.90	3.14	2.19	.08	none	none	none	none	.20	1.19	4.31	22.59	1868-69	19.31
1869	3.89	4.78	2.00	1.53	.20	none	none	none	.08	none	3.72	3.38	15.24	1869-70	14.10
1870	3.07	3.76	1.29	1.93	.21	none	none	none	.14	.21	2.62	7.25	30.86	1870-71	34.71
1871	4.22	6.97	1.64	1.10	.16	.02	none	none	none	.68	1.81	10.12	24.33	1871-72	13.02
1872	2.17	4.24	.73	.52	.01	.06	.03	.15	none	.21	5.92	4.15	20.09	1872-73	23.98
1873	2.17	1.83	3.55	1.04	.34	.08	none	none	.88	2.73	7.27	4.15	21.06	1873-74	19.16
1874	4.85	1.20	1.03	1.02	.11	1.01	none	none	none	3.86	1.25	2.08	21.06	1874-75	31.19
1875	6.97	4.92	5.49	1.29	.24	.04	.01	.01	none	3.86	1.25	2.08	21.06	1875-76	31.19
1876	7.55	4.92	5.49	1.29	.24	.04	.01	.01	none	3.86	1.25	2.08	21.06	1876-77	31.19
1877	4.32	1.18	1.08	1.20	.18	.01	.01	.01	none	3.86	1.25	2.08	21.06	1877-78	31.19
1878	1.83	1.18	1.08	1.20	.18	.01	.01	.01	none	3.86	1.25	2.08	21.06	1878-79	31.19
1879	1.83	1.18	1.08	1.20	.18	.01	.01	.01	none	3.86	1.25	2.08	21.06	1879-80	31.19
1880	1.83	1.18	1.08	1.20	.18	.01	.01	.01	none	3.86	1.25	2.08	21.06	1880-81	31.19

* Up to January 1, 1881.

SAN FRANCISCO'S ANNUAL METEOROLOGICAL REVIEW.

Showing the climatic condition in all its features for thirteen years, from 1878 to 1890, both years inclusive. Compiled by GEORGE H. WILSON, Observer in charge of the local Signal Station; barometer readings corrected for elevation and temperature:

ANNUAL WEATHER REVIEW FOR YEAR:	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Average barometer.....	29.976	30.033	30.047	30.044	30.060	30.054	30.001	30.023	30.041	30.038	30.016	30.00	30.93
Highest barometer.....	30.43	30.59	30.49	30.41	30.49	30.67	30.54	30.45	30.40	30.56	30.57	30.37	30.46
Lowest barometer.....	29.43	29.29	29.48	29.67	29.74	29.63	29.43	29.42	29.32	29.53	29.47	29.32	29.43
Range of barometer.....	1.00	1.30	1.01	.74	.75	.94	1.11	1.03	1.08	1.03	1.10	1.05	1.03
Average temperature.....	56.6	56.1	54.2	55.8	54.4	54.7	55.7	56.9	56.1	55.2	55.5	57.9	56.3
Highest temperature.....	78.0	89.0	83.5	83.0	83.0	85.2	83.0	87.0	86.9	86.9	83.4	83.0	86.0
Lowest temperature.....	39.0	54.0	37.0	40.0	34.5	35.0	35.0	43.0	41.0	33.1	28.7	39.0	36.0
Range of temperature.....	39.0	35.0	46.5	43.0	48.5	50.2	48.0	44.0	45.9	53.8	54.7	40.0	50.0
Greatest range of temperature.....	30.0	36.0	38.5	18.0	19.0	20.0	15.5	17.5	22.7	20.9	21.6	23.0	33.0
Least monthly range of temperature.....	20.0	20.0	71.8	72.0	70.0	75.4	71.5	73.7	77.9	78.8	63.9	78.0	66.2
Average maximum temperature.....	71.0	75.5	71.8	72.0	74.7	75.4	74.2	75.2	75.5	74.7	70.7	71.0	73.4
Average minimum temperature.....	47.2	46.0	44.6	46.6	44.7	45.3	47.2	49.2	45.6	44.7	50.7	51.0	49.4
Average monthly range of temp.....	23.8	29.5	27.2	25.4	25.2	30.1	27.5	26.0	30.0	30.0	18.2	18.0	24.0
Average humidity.....	72.9	73.9	75.6	75.8	75.0	78.1	79.5	81.0	75.1	75.4	78.5	78.0	77.4
Average dew point.....	S.W.	W.	W.	W.	W.	W.	W.	W.	W.	W.	W.	W.	W.
Prevailing direction of wind.....	32.26	30.76	30.07	23.73	18.67	15.43	38.82	24.90	20.02	19.04	23.03	36.94	25.43
Total precipitation.....	79.387	78.575	82.724	83.105	85.554	81.480	78.557	79.194	78.237	80.457	76.469	74.830	73.681
Maximum velocity of wind.....	40	40	44	36	36	36	45	36	42	36	40	36	36
Direction of maximum velocity.....	N.	N.E.	N.	W.	N.W.	W.	N.	W.	S.E.	W.	N.W.	S.W.	S..S.W., W.
Clear days.....	146	159	153	150	156	132	124	116	165	152	117	100	148
Fair days.....	142	146	110	126	144	152	148	157	134	140	155	135	146
Cloudy days.....	77	60	103	89	65	77	93	92	65	73	94	80	71
Days of precipitation.....	75	85	70	66	73	51	83	70	64	60	76	98	71
Snow storms.....	1	0	0	2	1	0	1	0	0	1	1	0	0
Thunder and lightning.....	0	0	0	0	4	2	3	0	1	1	0	0	0
Days temperature above 95°.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Days temperature below 32°.....	0	0	0	0	0	0	0	0	0	0	0	0	0

SANTA CLARA, CAL.

Weather summary for the year 1890 at Santa Clara, Cal. By A. McCullagh, Observer:

MONTH.	Mean Maximum Temperature.	Mean Minimum Temperature.	Mean Monthly Temperature.	Highest Temperature.	Lowest Temperature.	Rainy Days	Light Frosts
January.....	52.0	39.0	46.0	62.0	29.0	18	12
February.....	55.0	43.0	52.0	68.0	32.0	10	4
March.....	61.0	46.0	53.5	72.0	31.0	9	3
April.....	64.0	48.5	56.0	79.0	41.0	6	0
May.....	71.0	53.75	61.5	89.0	41.0	3	0
June.....	72.0	53.5	61.0	87.0	42.0	0	0
July.....	76.0	54.5	64.5	88.0	46.0	0	0
August.....	77.0	56.5	65.5	87.0	47.0	0	0
September.....	71.0	55.5	63.0	86.0	44.0	2	0
October.....	74.0	48.0	61.0	84.0	39.0	1	7
November.....	67.5	43.0	54.75	75.0	36.0	1	0
December.....	55.0	40.0	47.5	62.0	35.0	6	16
For the year.....	66.3	48.4	57.2	78.25	38.5	55	42

LOS GATOS, CAL.

Weather summary for the year 1890 at Los Gatos, California. By H. McCullagh, Observer:

MONTH.	Mean Monthly Temperature.	Highest Temperature.	Lowest Temperature.	Total Precipitation.
January.....	44.2	60	27	16.45
February.....	48.4	70	30	7.83
March.....	53.2	74	35	5.27
April.....	56.8	82	38	1.25
May.....	63.5	94	42	1.30
June.....	63.5	93	40	0
July.....	67.8	97	44	0
August.....	67.7	93	45	0
September.....	65.6	91	44	.19
October.....	61.6	85	41	0
November.....	55.5	77	36	.03
December.....	46.6	62	33	4.74
For the season.....	57.9	*97	+27	37.06

In July. † In January.
21st

NORTH HILL VINEYARD, MILTON, CALAVERAS COUNTY, CAL.

Altitude, six hundred and fifty feet; latitude, 38° 6' north; longitude, 120° 50' west. Prepared and furnished by EDWARD WESSON, CAL.

1890.	TEMPERATURE.				Rain Days
	Max.	Min.	Max. Daily Range.	Mean.	
January.....	55	28	14	42.4	
February.....	67	29	14	47.6	
March.....	69	39	20	53.1	
April.....	80	44	23	59.3	
May.....	96	47	22	67.7	
June.....	95	52	28	73.5	
July.....	104	57	29	81.8	
August.....	98	59	29	77.7	
September.....					
October.....	82	46	25	65.5	
November.....	78	43	22	58.6	
December.....	56	32	14	45.1	
For the year.....				62.1	

Mean temperature in 1888.....

Mean temperature in 1889.....

Mean temperature in 1890.....

Mean average for three years.....

Monthly Notes for 1890 at the North Hill Vineyard, Milton, Cal.

February 28th, pruning vines ended; began in mid-December much hindered by rain and mud.

March 4th, apricots in blossom; 14th, *Riparia* (wild vine) in leaf; 27th, first muscat in leaf.

April 2d to 25th, plowing and poling vineyard; no chance sooner, owing to sodden ground; 3d to 28th, grafting muscat stocks; 24th, first sulphuring; 29th, suckering began.

May 10th, last rain of the season, with thunder, lightning, and heavy hail; 12th, second sulphuring; 14th, muscats in blossom; of suckering.

June—First crop of muscats had begun to set by beginning 9th to 27th, first irrigation; 16th, second crop of muscats in blossom; second crop beginning to set; 28th, sun scald is now obvious.

July 14th to August 1st, second irrigation.

August 1st, muscats ripe for eating; 23d, first sale of muscat; 30th, third irrigation to advance second crop; it deferred maturing crop; was probably continued too late.

September 1st to 15th, picking first crop; 22d, began taking of first crop; 28th, 29th, and 30th, rain.

October 3d to 11th, picking second crop; 24th, last raisins of taken up; 24th to November 6th, finished picking second crop.

November, drying raisins continued in the open air to the end of month.

December 10th, pruning vines.

A brief summary of the weather at Fresno. Furnished by J. R. WILKINS, the Signal Service Observer.

1890:	For the Year.											
	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.
Mean temperature.....	43	47	55	61	69	73	82	81	75	64	57	44
Highest temperature.....	53	70	77	82	92	104	111	106	103	83	82	70
Lowest temperature.....	24	23	33	36	42	42	36	36	33	42	37	28
Monthly range.....	29	47	44	46	50	62	75	70	70	41	45	42
Days temperature below 32°.....	9	3	0	1	9	14	30	30	18	0	0	4
Days temperature above 80°.....	0	0	0	0	4	42	41	48	48	43	37	0
Mean dew point.....	36	38	43	44	48	55	60	58	53	51	55	41
Mean humidity.....	82	73	63	60	55	42	30	38	48	43	37	22
Total precipitation.....	2.12	.80	1.04	1.17	.45	6.07	5.558	trace	1.26	3.848	2.22	2.30
Highest wind velocity.....	4,003	8,466	4,190	4,456	5,335	6,067	5,558	5,019	8,706	8,348	2,292	2,561
Direction at time of highest velocity.....	N.W.	E.	N.W.	N.W.	N.W.	W.	W.	N.W.	N.W.	N.W.	W.	S.E.
Prevailing wind direction.....	N.W.	E.	N.W.	N.W.	N.W.	W.	W.	N.W.	N.W.	N.W.	W.	S.E.
Clear days.....	6	6	9	17	19	26	30	26	20	28	24	1
Fair days.....	18	13	10	9	6	4	1	4	6	3	4	6
Cloudy days.....	12	9	12	4	6	0	0	1	4	0	2	7
Rainy days.....	11	7	6	2	3	0	0	0	5	0	1	5
Thunder storms.....	0	0	0	0	0	0	0	0	2	0	0	0

VISALIA, CAL.

The climatic features and peculiarities of Visalia, by Capt. Nanscauwen, will be found described as follows for the year 1890.

As a general thing figures are considered dull and uninteresting that cannot be said when they are used in recording the climatic conditions occurring in Visalia. All residents of this county are in the climate of the county. An idea prevails in some quarters that our summers are torrid and that the heat is unbearable. It is understood in this connection that while our thermometer is high, still there is at least 15 per cent less humidity in the sphere of this county than in the East. Then, as an illustration, the temperature is 85° here the corresponding temperature in the favored States would be 100°, because the atmosphere in California is drier.

A record of the temperature twice a day is made, at 7 o'clock in the morning and at 3 o'clock in the afternoon. The statistics are based on the temperature taken at 3 o'clock in the afternoon. The average temperature for the year 1890 was 71.25°. During the summer August was the warmest month, the average temperature (at 3 o'clock P. M.) being 94°. The coldest month was last January when the average temperature was 49°. The hottest day of the past year was July 25th, when the mercury rose to 104°. The coldest day was January 21st, when the mercury dropped to 40°.

Following are the average, maximum, and minimum temperatures for the months:

January.—Average temperature, 49°; maximum, 58°, on the 14th; minimum, 40°, on the 21st.

February.—Average temperature, 56°; maximum, 65°, on the 4th; minimum, 46°, on the 17th.

March.—Average temperature, 46°; maximum, 51°, on the 9th.

April.—Average temperature, 72°; maximum, 86°, on the 28th; minimum, 64°, on the 18th and 19th.

May.—Average temperature, 81°; maximum, 98°, on the 25th; minimum, 70°, on the 8th, 11th, and 28th.

June.—Average temperature, 87°; maximum, 97°, on the 7th, 30th; minimum, 74°, on the 1st and 2d.

July.—Average temperature, 76°; maximum, 104°, on the 25th; minimum, 89°, on the 8th and 9th.

August.—Average temperature, 94°; maximum, 101°, on the 5th; minimum, 86°, on the 30th.

September.—Average temperature, 88°; maximum, 94°, on the 1st; minimum, 70°, on the 27th.

October.—Average temperature, 75°; maximum, 82°, on the 1st; minimum, 65°, on the 9th and 10th.

November.—Average temperature, 64°; maximum, 77°, on the 1st; minimum, 52°, on the 6th.

December.—Average temperature, 50°; maximum, 59°, on the 18th, and 19th; minimum, 41°, on the 10th.

In the table below will be found the rainfall for the past three years. Last year's rainfall amounted to 9.87 inches. The rainy season commences in the fall, and ends in the spring. The rainfall for the year so far is 3.98 inches. The rainfall last season (fall of 1889 and

spring of 1890) amounted to 14.22 inches, an unusual record. The rainfall for the season before (fall of 1888 and spring of 1889) amounted to only 10.67 inches.

It was during last season, in January, that Visalia experienced a heavy rain. On Friday, January twelfth, rain began to fall, with a low temperature for the season. By morning .10 of an inch had fallen, and by evening of Saturday an additional 1.31 inches were added, and still raining, with a warm atmosphere. It now became evident that high water would follow, and preparations began to be made for a flood. During Saturday night .23 of an inch was reported, which made the total for storm of 1.64 inches, which fell upon an immense body of snow on the mountains and foothills. The next day nearly the entire city was covered with water, and was quite deep in places. In the evening the flood subsided as quickly as it came. Had the weather been warmer the result would have equaled the flood of 1867.

Following is the table of rainfall for the past three years:

MONTH.	1888.	1889.	1890.
January.....	3.06	.70	3.34
February.....	.16	.86	1.12
March.....	1.61	3.46	1.10
April.....	.14	.49	.25
May.....		1.22	.46
June.....	.35	trace	.73
July.....		4.08	
August.....	2.39	.66	.51
September.....	1.70	3.21	2.36
Total.....	9.41	14.18	9.87

Rainfall for season of 1888-89 was 10.67 inches; 1889-90, 14.22 inches.

SANTA MARIA, CAL.

Weather summary for the year 1890, at Santa Maria, Cal. By L. E. BLOCHMAN, Observer:

MONTH.	Mean Monthly Temperature..	Highest Temperature.....	Lowest Temperature.....	Total Precipitation.....	Clear Days.....	Fair Days.....	Cloudy Days*.....	Rainy Days*.....	Light Frosts.....	Killing Frosts.....	Prevailing Wind—Direction.....
January.....	46.6	66	28	3.71	7	10	14	12	12	4	S. E.
February.....	51.4	76	30	3.64	6	10	12	8	6	3	W.
March.....	54.5	76	34	.88	9	12	14	7	3	none	W.
April.....	57.3	83	37	.10	7	12	11	2	none	none	W.
May.....	61.7	86	41	.13	10	13	21	3	none	none	W.
June.....	60.0	86	42	—	14	14	4	none	none	none	W.
July.....	62.0	85	46	—	10	14	3	none	none	none	W.
August.....	65.4	92	48	.55	10	10	11	none	none	none	W.
September.....	63.3	80	48	—	2	14	14	2	none	none	W.
October.....	61.8	92	34	.70	19	12	—	none	2	none	W.
November.....	58.3	86	36	3.40	26	5	—	1	none	none	W. & E.
December.....	53.6	78	33	—	13	—	—	8	4	none	W.
For the year.....	58.0	†92	†28	13.11	130	116	119	43	27	7	W.

* Cloudy days include all that are both cloudy and rainy. † In August and October. ‡ In January.

STEELE STATION, SAN LUIS OBISPO COUNTY, CAL.

Weather summary for the year 1890 at Steele Station (Edna Post Office), San Luis Obispo County, California. By A. T. MASON, Observer:

MONTH.	Mean Maximum Temperature..	Mean Minimum Temperature..	Mean Monthly Temperature..	Highest Temperature.....	Lowest Temperature.....	Total Precipitation.....
January.....	53.1	35.2	44.1	58	32	6.45
February.....	58.6	41.5	51.0	74	33	4.66
March.....	63.1	45.0	54.0	75	38	2.96
April.....	66.1	47.0	56.5	87	39	.30
May.....	70.0	51.1	60.5	87	42	.40
June.....	72.4	48.9	60.7	87	44	—
July.....	78.2	50.2	64.2	88	47	—
August.....	77.0	54.5	65.7	92	48	—
September.....	74.7	52.9	63.8	85	49	.91
October.....	78.0	50.2	64.1	91	41	—
November.....	70.0	46.3	58.2	82	39	1.37
December.....	63.6	46.1	54.8	71	41	4.82
For the year.....	68.9	47.4	58.1	*92	†32	20.96

* In August. † In January.

SANTA BARBARA, CAL.

By PROF. HUGH D. VAIL.

The following synopsis of the weather for the year 1890 is compiled from daily observations of temperature as shown by self-registering thermometers in my observatory, and the movement of wind as measured by a Robinson anemometer:

MONTH.	Mean Monthly Temperature..	Mean Maximum Temperature..	Mean Minimum Temperature..	Rainfall, Inches.	Hourly Movement of Wind, Miles.....	Relative Humidity.....	Clear Days.....	Fair Days.....	Cloudy Days.....
January.....	48.4	55.0	43.5	5.32	3.6	69	20	5	6
February.....	52.6	68.2	45.0	2.96	3.7	66	19	2	7
March.....	55.8	61.5	50.3	1.10	4.2	65	18	4	9
April.....	56.6	69.8	51.8	.31	3.2	76	13	4	13
May.....	60.0	75.0	53.7	.18	3.4	75	11	5	15
June.....	62.4	74.5	56.2	.06	3.4	72	21	2	7
July.....	67.3	71.3	63.5	—	3.6	73	29	1	1
August.....	67.9	83.3	62.5	—	3.4	75	19	7	5
September.....	66.5	71.3	62.7	1.50	3.0	79	15	7	8
October.....	64.0	75.5	54.3	—	2.7	70	26	5	—
November.....	63.3	72.5	52.5	.48	2.6	53	28	1	1
December.....	58.4	65.0	52.5	3.53	2.9	64	19	4	8

The mean temperature of the year was 60.2°, being .4° less than in 1889.

On 41 days during the year the temperature rose above 80° in the warmest part of the day, and on 6 it fell below 35° at night; while there were but 2 nights when it did not fall below 65°.

The highest temperature was 98°, and the lowest 33.5°.

The number of clear days in the year was 238, of fair days 47, cloudy, 80.

There were 21 days when the rainfall was over .10 of an inch, only 8 that could be called rainy.

The mean relative humidity was 70°, and the average velocity of wind 3.3 miles an hour; while the greatest movement in any one day was 249 miles, or less than 10.5 miles an hour.

Total precipitation for the year, 15.44 inches.

LA GRANGE, CAL.

Weather summary for the year 1890 at La Grange, Cal. By DOMINICI, Observer:

MONTH.	Mean Monthly Temperature.	Highest Temperature.	Lowest Temperature.	Total Precipitation.	Rainy Days.
January.....	42.3	58	27	5.17	10
February.....	45.9	70	20	3.77	10
March.....	49.0	73	34	2.13	10
April.....	59.8	91	39	1.45	10
May.....	68.6	104	46	1.42	10
June.....	71.6	104	47	trace	10
July.....	82.8	105	56	trace	10
August.....	80.6	111	55	trace	10
September.....	75.8	107	54	.96	10
October.....	64.5	92	42	trace	10
November.....	55.7	85	38	.18	10
December.....	50.0	68	32	2.83	10
For the year.....	62.2	*111	†20	18.00	80

* In August. † In February.

LOS ANGELES, CAL.
Highest, lowest, and mean temperature for each month, from 1890 to date, at Los Angeles:

HIGHEST, LOWEST, AND MEAN TEMPERATURE FOR EACH MONTH, FROM 1860 TO 1900, AT LOS ANGELES.																			
YEAR.	JANUARY.			FEBRUARY.			MARCH.			APRIL.			MAY.			JUNE.			
	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	
1860.....	76.0	30.0	51.3	76.5	33.5	50.1	73.5	36.0	51.1	83.0	40.0	55.9	97.0	42.0	61.1	83.0	50.0	63.4	
1861.....	71.0	27.0	49.4	80.5	42.5	57.9	89.0	37.0	55.8	64.0	48.0	61.4	89.3	41.0	62.7	88.0	48.0	65.6	
1862.....	74.2	32.0	49.4	78.7	32.0	50.3	87.8	35.3	55.3	80.0	40.0	56.4	86.1	42.1	61.7	87.1	49.6	64.4	
1863.....	82.0	30.0	53.5	82.0	28.0	52.3	84.0	42.6	56.7	89.0	39.0	57.3	100.0	39.5	62.1	100.0	52.0	68.8	
1864.....	78.0	33.7	53.9	81.0	38.5	55.1	72.5	37.0	54.8	80.0	41.5	57.2	79.0	47.0	61.6	98.0	49.5	65.6	
1865.....	71.6	38.0	53.9	81.0	36.3	56.6	85.1	42.3	60.6	86.6	44.8	61.9	80.0	48.6	63.5	90.1	47.0	63.0	
1866.....	75.3	32.0	54.7	81.0	41.1	59.5	76.0	37.2	54.3	80.0	42.3	57.2	89.0	44.2	62.4	91.6	48.2	66.1	
1867.....	79.6	33.1	55.4	81.5	35.4	51.6	85.0	41.1	59.1	87.0	40.3	59.1	93.0	44.5	63.1	100.1	46.7	66.1	
1868.....	71.0	30.9	50.0	73.5	39.2	54.4	79.0	35.9	55.1	89.0	44.0	61.9	82.0	45.0	60.8	94.0	50.5	67.5	
1869.....	71.0	32.0	52.4	84.0	33.0	56.4	81.0	44.0	59.2	93.0	46.0	62.2	94.0	46.0	62.6	81.0	51.0	66.4	
1870.....	67.0	34.0	49.0	81.0	35.0	54.0	81.0	40.0	58.0	94.0	42.0	59.0	96.0	43.0	63.0	105.0	48.0	68.0	
YEAR.	JULY.			AUGUST.			SEPTEMBER.			OCTOBER.			NOVEMBER.			DECEMBER.			
	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	Highest.	Lowest.	Mean ..	
1880.....	85.0	52.0	64.2	87.0	52.0	66.4	91.0	44.0	64.5	89.0	44.0	62.0	85.0	35.0	55.5	80.0	38.0	55.6	
1881.....	96.1	62.8	69.3	92.1	59.8	76.0	102.0	50.0	67.9	82.3	43.0	60.9	80.8	34.2	57.5	79.3	35.3	54.7	
1882.....	98.1	52.3	68.0	98.9	57.0	71.0	100.0	46.0	67.6	88.0	44.0	63.0	81.0	36.0	57.3	82.0	35.0	56.4	
1883.....	90.0	52.5	69.8	98.0	50.0	69.8	102.5	53.0	71.9	83.0	43.5	61.0	84.0	42.0	59.2	80.0	37.0	56.3	
1884.....	94.0	51.5	70.2	101.5	52.5	71.3	92.5	45.5	65.5	89.1	42.9	62.3	88.0	38.7	59.6	75.6	35.5	52.3	
1885.....	98.5	52.4	70.0	105.6	51.2	72.7	103.5	51.2	69.5	102.3	41.6	64.8	78.5	40.3	59.5	82.0	40.3	57.9	
1886.....	98.1	50.4	69.7	98.1	53.7	71.8	91.3	49.3	65.6	82.2	41.1	63.3	84.9	34.1	56.6	84.8	37.3	56.7	
1887.....	98.1	61.9	69.6	98.6	52.1	68.5	91.0	49.2	68.2	92.2	47.2	65.0	86.0	38.8	60.0	73.2	35.2	53.7	
1888.....	95.0	49.0	67.9	97.0	51.3	67.6	98.2	55.0	68.4	98.0	44.0	61.9	83.8	40.0	57.2	78.8	41.0	56.2	
1889.....	99.0	54.0	70.8	98.0	53.0	71.6	103.0	52.0	72.6	89.0	50.0	66.3	82.0	43.0	61.3	68.0	40.0	54.8	
1890.....	97.0	55.0	73.0	98.0	56.0	73.0	94.0	54.0	71.0	99.0	46.0	68.0	96.0	41.0	66.0	82.0	43.0	61.0	

The number of days in each month and each year the temperature was above 90° and below 32°, at Los Angeles:

MONTH.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
January—Above 90°		0	0	0	0	0	0	0	0	0	0	0	0	0
Below 32°		0	0	1	0	0	1	0	0	0	0	0	0	0
February—Above 90°		0	0	0	0	0	0	0	0	0	0	0	0	0
Below 32°		0	0	0	0	0	2	0	0	0	0	0	0	0
March—Above 90°		0	1	0	0	0	0	0	0	0	0	0	0	0
Below 32°		0	0	0	0	0	0	0	0	0	0	0	0	0
April—Above 90°		0	0	0	1	0	0	0	0	0	0	0	0	0
Below 32°		0	0	0	0	0	0	0	0	0	0	0	0	0
May—Above 90°		0	2	1	0	0	3	0	0	0	0	0	0	0
Below 32°		0	0	0	0	0	0	0	0	0	0	0	0	0
June—Above 90°		0	3	0	0	0	6	2	1	4	0	0	0	0
Below 32°		0	0	0	0	0	0	0	0	0	0	0	0	0
July—Above 90°	3	0	0	0	5	3	5	7	7	9	9	9	9	9
Below 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August—Above 90°	0	0	2	0	4	5	8	8	11	13	13	13	13	13
Below 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September—Above 90°	1	4	4	1	7	2	10	1	1	1	1	1	1	1
Below 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October—Above 90°	0	1	6	0	0	0	0	0	2	0	0	0	0	0
Below 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
November—Above 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Below 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
December—Above 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Below 32°	0	1	1	2	0	0	0	0	0	0	0	0	0	0
Annual—Above 90°	4	5	18	1	17	10	27	15	28	27	27	27	27	27
Below 32°	0	1	1	1	1	0	3	0	0	0	0	0	0	0

RAINFALL AT LOS ANGELES, CAL.
The following figures, from February, 1872, to June, 1877, are from the records of Mr. C. DUNCUMBER, of Los Angeles; from July, 1877, to date, from Signal Office records:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	Octo- ber.	Novem- ber.	Decem- ber.	Total for Year.	Season ol.	Total for Season.
1872	2.08	2.25	.43	.97	.10	none	none	.22	none	none	none	4.42	8.89	1872-73	13.96
1873	6.61	7.19	1.09	none	none	none	none	1.06	none	none	none	5.74	16.86	1873-74	24.78
1874	17.22	9.77	1.09	.45	.42	none	none	none	1.81	none	1.89	.20	21.20	1874-75	21.67
1875	6.54	7.92	3.41	.07	.05	none	none	none	.40	none	7.57	.82	26.10	1875-76	28.74
1876	8.46	7.92	3.41	.45	.03	none	none	none	.86	none	none	none	18.75	1876-77	5.28
1877	3.33	7.68	2.67	.26	.30	none	none	none	.14	none	.45	3.93	10.12	1877-78	21.35
1878	3.89	7.68	2.67	1.71	.66	.07	none	none	.93	none	none	4.70	20.86	1878-79	11.35
1879	1.33	1.56	1.45	1.19	.24	.03	none	none	.14	none	3.44	6.53	17.41	1879-80	20.34
1880	1.43	1.86	1.45	5.06	.04	none	sprin.	sprin.	.82	none	.67	8.40	18.65	1880-81	13.13
1881	1.01	2.66	1.83	.46	.01	none	none	sprin.	.06	sprin.	.27	.52	5.53	1881-82	10.40
1882	1.02	3.47	2.87	1.15	.63	sprin.	none	none	1.42	none	1.82	.08	10.74	1882-83	12.11
1883	3.15	13.37	12.36	3.58	2.02	.03	sprin.	none	.39	sprin.	1.07	2.66	14.14	1883-84	38.22
1884	1.05	1.01	.01	2.01	.39	1.39	sprin.	.02	sprin.	.30	5.55	4.65	40.39	1884-85	9.29
1885	7.78	1.41	.01	3.32	.06	sprin.	sprin.	sprin.	.05	.02	1.18	1.65	10.69	1885-86	22.72
1886	.20	9.25	2.52	3.82	.01	.11	sprin.	21	.11	.02	1.18	.26	17.22	1886-87	14.42
1887	6.04	.90	3.17	2.36	.20	.07	.07	sprin.	.18	.40	.80	2.68	16.07	1887-88	14.09
1888	.25	.92	6.48	.12	.05	.01	trace	.10	.03	.66	4.02	6.26	21.04	1888-89	19.42
1889	7.83	1.36	.66	.27	.65	.01	none	.28	.34	6.96	1.35	15.80	33.31	1889-90	34.84
1890				.22	.03	.02	none	.03	.06		.13	2.32	12.49	1890-91	*2.57

* To January 1, 1891.

The number of clear, fair, and cloudy days in each month of the year, from 1880 to 1890, inclusive, at Los Angeles:

MONTH.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
January—Clear.....	20	17	18	21	17	*17	13	21	14
Fair.....	10	9	6	6	8	*10	6	10	8
Cloudy.....	1	5	7	4	6	3	12	0	9
February—Clear.....	16	14	16	13	11	16	20	13	14
Fair.....	8	12	9	9	8	11	4	9	8
Cloudy.....	5	2	3	6	10	1	4	6	7
March—Clear.....	16	15	15	6	9	14	14	18	10
Fair.....	10	13	5	14	11	12	11	12	12
Cloudy.....	5	3	11	11	11	5	6	1	9
April—Clear.....	8	6	16	10	11	11	13	11	14
Fair.....	10	13	9	18	13	12	10	10	8
Cloudy.....	12	11	5	2	7	7	7	9	8
May—Clear.....	15	9	12	12	7	4	14	14	5
Fair.....	11	15	11	15	16	21	14	*11	18
Cloudy.....	5	7	8	4	8	6	3	5	8
June—Clear.....	7	12	11	15	8	15	*10	17	17
Fair.....	22	16	14	12	9	14	*16	10	12
Cloudy.....	1	2	5	3	13	1	3	3	1
July—Clear.....	5	11	9	11	24	14	15	13	17
Fair.....	23	19	22	19	7	16	14	13	13
Cloudy.....	3	1	0	1	0	1	2	5	1
August—Clear.....	12	12	*16	20	23	16	21	11	23
Fair.....	16	18	*6	10	8	14	8	20	8
Cloudy.....	3	1	1	1	0	1	2	0	0
September—Clear.....	6	16	26	22	20	18	15	15	21
Fair.....	23	11	2	8	8	12	15	12	7
Cloudy.....	1	2	2	0	2	0	0	3	2
October—Clear.....	9	19	20	13	25	21	15	24	18
Fair.....	16	9	9	14	4	10	14	6	10
Cloudy.....	6	3	2	4	2	0	2	1	5
November—Clear.....	17	25	16	18	21	14	22	18	15
Fair.....	12	5	8	11	7	8	7	9	8
Cloudy.....	1	0	6	1	2	8	1	3	7
December—Clear.....	10	15	22	22	*13	21	18	21	18
Fair.....	10	14	8	7	*11	5	12	7	6
Cloudy.....	11	2	1	2	6	5	1	3	7
Annual—Clear.....	141	172	197	183	189	181	190	196	184
Fair.....	171	154	109	143	110	145	131	129	118
Cloudy.....	54	39	51	39	66	38	43	39	64

* Records incomplete.

MONTH.	W.	W.	W.	W.	W.	W.	W.	W.	W.	W.
January.....	16	7	2	none	none	none	none	none	none	26
February.....	10	9	4	1	2	none	none	2	5	40
March.....	7	5	6	5	7	none	1	3	6	52
April.....	8	6	14	16	15	16	8	8	3	105
May.....	16	17	11	9	9	14	27	20	26	208
June.....	4.28	1.76	.56	.06	.17	none	none	.55	.71	11.55
July.....	26.5	23.0	32.0	35.5	38.5	43.5	50.5	52.5	49.0	+26.5
August.....	68.5	82.0	83.0	93.0	96.5	104.0	105.0	104.0	97.0	*108.0
September.....	43.1	50.2	53.3	58.0	62.6	67.1	76.1	74.1	63.1	60.7
October.....	34.5	38.4	41.3	46.8	50.7	50.9	58.3	60.7	56.5	47.6
November.....	55.5	65.3	70.6	76.4	79.4	87.8	96.8	89.7	86.0	78.5
December.....	63.3	66.3	70.6	76.4	79.4	87.8	96.8	89.7	86.0	78.5
For the year.....	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7	60.7

There were no killing frosts during the year.

* In July. † In January.

Weather summary for the year 1890, at Riverside, Cal. By W. E. Kairn, Observer.

RAINFALL AT RIVERSIDE, CAL.

The following rainfall record by months, years, and seasons was furnished by Mr. ALBERT S. WHITE, of Riverside, San Bernardino County, through W. E. KERR, and covers the period from November, 1880, to date:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1880															
1881	.48	.25	1.30	.74	.03	none	none	none	.10	.40	.20	2.16	8.95	1881-82	6.31
1882	1.70	1.40	1.08	.72	.08	.18	none	none	none	.13	.25	.40	5.78	1882-83	2.94
1883	.09	.83	.89	.26	.25	none	none	none	none	.97	none	.20	5.54	1883-84	22.74
1884	.84	7.94	6.96	1.67	1.99	.52	none	none	none	.12	.12	2.56	25.32	1884-85	8.97
1885	.77	none	.01	2.15	.24	none	none	none	none	.02	1.34	.62	5.15	1885-86	9.42
1886	2.68	1.38	1.96	1.43	none	none	none	none	none	none	.54	.04	8.02	1886-87	5.92
1887	.13	3.30	.02	1.70	.17	.02	none	none	none	.75	.87	.85	7.81	1887-88	11.75
1888	4.17	1.05	3.84	.18	.94	none	none	none	none	none	2.83	3.37	15.48	1888-89	15.55
1889	.87	1.30	5.10	1.83	.25	none	none	none	.09	1.35	1.82	7.80	20.41	1889-90	18.19
1890	4.28	1.76	.55	.06	.17	none	none	.55	.71	.07	.33	3.07	11.53	1890-91	*17.90

* Up to January 1, 1891.

RAINFALL AT SAN BERNARDINO, CAL.

The rainfall at San Bernardino was furnished by Mr. SIDNEY F. WHITE, of the San Bernardino Water Company, and extends from July, 1870, to date:

YEAR.	Janu- ary.	Febru- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	Total for Year.	Season of.	Total for Season.
1870	6.91	2.21	.19	.84	.11	.07	none	none	.02	.09	3.11	.89	16.89	1870-71	13.94
1871	none	2.20	.37	.79	.06	none	none	.04	.13	none	1.88	3.91	9.21	1871-72	8.98
1872	6.50	1.25	.51	.84	.21	none	none	.02	.04	none	1.17	4.40	16.87	1872-73	15.10
1873	5.51	8.76	1.08	.48	.42	none	none	.06	.02	.01	1.74	5.78	23.21	1873-74	23.81
1874	7.20	1.15	.22	.07	.05	none	none	none	none	1.82	1.88	2.20	23.21	1874-75	13.66
1875	6.55	1.92	3.41	.44	.03	.03	none	none	none	none	7.50	.02	15.21	1875-76	19.90
1876	3.50	4.03	.83	.26	.30	none	none	none	none	.20	.40	none	12.98	1876-77	9.52
1877	3.33	6.68	2.57	1.71	.66	.07	none	none	none	.14	.05	3.95	14.23	1877-78	20.33
1878	3.59	1.00	.50	1.20	.24	.03	.11	.02	.01	.94	3.40	6.50	20.00	1878-79	11.54
1879	1.56	1.33	1.45	5.00	.04	none	none	none	none	.14	.67	8.80	17.54	1879-80	20.36
1880	1.40	.86	1.66	.46	.01	none	none	none	none	.80	.27	.50	6.46	1880-81	13.60
1881	1.11	2.65	3.80	2.91	none	none	none	none	none	.10	.15	.45	9.67	1881-82	11.04
1882	1.60	1.10	2.82	2.95	none	none	none	none	.53	.85	.09	2.63	12.76	1882-83	9.17
1883	1.63	12.20	9.95	5.68	3.17	.59	none	none	none	none	.11	3.75	37.08	1883-84	37.51
1884	2.79	.11	.28	1.89	1.69	.19	none	none	none	.39	4.36	1.20	12.90	1884-85	10.81
1885	6.44	2.52	4.18	2.36	.82	.16	none	none	none	none	.11	.61	16.70	1885-86	21.93
1886	.39	6.44	4.41	1.90	.42	.22	none	none	none	1.17	2.29	1.91	19.39	1886-87	14.60
1887	4.01	3.60	3.41	1.58	.62	.03	none	.04	.09	.05	4.12	4.64	20.96	1887-88	17.76
1888	.93	1.50	6.55	2.05	1.13	none	none	none	none	2.30	2.23	10.85	28.45	1888-89	20.97
1889	5.15	2.40	.89	none	.31	none	.13	2.16	.88	.58	1.27	3.02	16.79	1889-90	25.94
1890														1890-91	*8.04

* Up to January 1, 1891. † Twelve inches of snow, January 12, 1882.

SAN DIEGO, CAL.

The following meteorological data, at San Diego, was furnished by M. E. HEARNE, Observer Signal Corps, in charge:

1890:	Jan- ary.	Febr- ary.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	Novem- ber.	Decem- ber.	For the Year.
Mean temperature.....	51.00	54.00	56.00	59.00	60.00	64	68	70	69.00	65.00	64.00	61.00	62.00
Mean maximum temperature.....	58.00	62.00	65.00	65.00	66.00	71	74	75	75.00	71.00	76.00	69.00	69.00
Mean minimum temperature.....	41.00	46.00	48.00	52.00	55.00	57	63	64	63.00	56.00	52.00	52.00	54.00
Mean vary of temperature.....	15.00	16.00	17.00	12.00	11.00	13	12	11	12.00	13.00	24.00	17.00	15.00
Greatest vary of temperature.....	31.00	39.00	33.00	40.00	29.00	42	24	31	23.00	41.00	45.00	32.00	34.00
Days temperature above 90°.....						2				1.00			2.00
Days temperature below 32°.....													
Total rainfall.....	2.99	1.70	.41	.05	.08			trace	.65	.01	.72	1.61	8.02
Greatest rainfall in any twenty-four hours.....	1.32	1.04	.38	.03	.04			trace	.37	.01	.72	1.23	
Wind velocity.....	3,698	3,515	3,642	3,686	3,433	3,890	3,499	3,446	3,118	3,006	3,078	3,335	41,355
Maximum wind velocity.....	28	30	24	20	21	21	20	23	24	21	21	26	*30
Direction of maximum wind velocity.....	S.	S.	N.W.	S.E.	N.W.	S.W.	S.W.	N.W.	N.W.	S.W.	N.E.	S.E.	S.
Clear days.....	1	13	11	9	12	15	18	14	18	23	23	14	185
Fair days.....	11	3	9	8	7	15	9	7	1	3	5	5	83
Cloudy days.....	5	12	11	13	12		4	10	11	6	2	12	97
Rainy days.....	9	9	4	2	3				5	1	2	6	41

*Highest.

WEATHER SUMMARY FOR THE YEAR 1890 AT SWEETWATER DAM (NATIONAL CITY), NEAR SAN DIEGO, SAN DIEGO COUNTY, CAL.

By Mr. JOHN BEALL, Observer.

MONTH.	Mean Maximum Temperature..	Mean Minimum Temperature..	Mean Monthly Temperature..	Highest Temper- ature.....	Lowest Temper- ature.....	Total Precipita- tion.....	Clear Days.....	Fair Days.....	Cloudy Days.....	Light Frosts.....	Prevailing Wind Direction.....
January.....	58.19	40.10	49.145	69	30	2.22	*17	112	2	12	N.E.
February.....	63.17	43.11	53.14	79	35	2.73	14	119	5	0	N.E.
March.....	66.94	45.26	56.10	76	38	.64	16	812	3	0	W.S.W.
April.....	67.70	50.36	58.71	84	40	.13	7	18	5	0	S.W.
May.....	67.84	51.87	59.85	79	55½	.41	9	14	8	0	S.W.
June.....	75.63	55.73	65.68	104	41		20	10	0	0	S.W.
July.....	81.06	60.39	70.73	102	53		25	6	0	0	S.W.
August.....	82.35	60.39	71.37	104	52	.87	23	8	0	0	S.W.
September.....	81.20	61.63	71.41	94	57		19	9	2	0	S.W.
October.....	80.06	52.71	66.39	98	45	.98	25	6	0	0	S.W.
November.....	80.40	48.83	64.62	98	43		26	3	2	0	W.
December.....	71.98	49.71	60.82	88	45	2.43	15	11	5	0	N.W.
For the year.....	73.04	51.674	62.3	88.3	44.54	10.36	216	118	32	12	

* Of the "clear days," four show precipitation at night.

† Of the "fair days," four show precipitation at night.

‡ Of the "fair days," seven show precipitation at night.

§ Of the "fair days," two show precipitation at night.

JULIAN, SAN DIEGO COUNTY, CAL.

Weather summary for the year 1890 at Julian, San Diego
elevation, four thousand feet. By W. A. SICKLER, Observer:

MONTH.	Mean Temperature.
January.....	41.0
February.....	47.0
March.....	51.0
April.....	57.0
May.....	60.0
June.....	68.0
July.....	74.0
August.....	71.0
September.....	67.0
October.....	60.0
November.....	56.0
December.....	50.0
For the year.....	58.0

TEMPERATURE AND RAINFALL AT VARIOUS PLACES

Mean temperature, highest and lowest temperature, and total
precipitation for the year 1890, at the following Voluntary Signal
Stations throughout California, from the report of the annual
issued from the United States Signal Office, Washington City, D. C.

STATIONS.	Mean Yearly Temperature.	Highest Tem- perature.	Lowest Tem- perature.	Total Precipita- tion—Inches.
Alcatraz Island.....	53.4	85		
Almaden.....	58.8	94		
Anaheim.....	66.8	107		
Angel Island.....	55.4	91		
Antioch.....	62.6	107		
Athlone.....	64.2	110		
Auburn.....	59.6	105		
Bakersfield.....	66.7	109		
Barstow.....	63.9	114		
Beaumont.....	62.7	105		
Benicia Barracks.....	57.7	100		
Berendo.....	63.9	113		
Berkeley.....	54.5	86		
Boulder Creek.....	56.2	110		
Brighton.....	62.4	106		
Castroville.....	57.1	87		
Centerville.....	61.1	100		
Chico.....	61.5	111		
Cisco.....	43.9	87		
Colgrove.....				
Colfax.....	58.5	102		
Colton.....	66.7	110		
Crescent City.....				
Delta.....	58.7	106		
Dunnigan.....	64.0	116		
Elmira.....	62.5	110		

TEMPERATURE AND RAINFALL AT VARIOUS PLACES—Continued.

STATIONS.	Mean Yearly Temperature.	Highest Tem- perature.	Lowest Temper- ature.	Total Precipita- tion—Inches.
Verano.....	57.6	100	27	35.37
Wagont Gap.....	48.1	92	15	52.11
Wagont Gap.....				18.41
Wagon.....	61.1	100	26	50.22
Wagon.....	61.9	108	26	29.25
Wagon.....	55.1	105	24	57.98
Wagon.....	54.4	81	35	23.42
Wagon.....	66.9	112	29	7.63
Wagon.....	58.3	98	18	62.83
Wagon.....	58.1	99	26	23.94
Wagon.....	57.4	99	17	10.75
Wagon.....	64.4	110	26	7.63
Wagon.....	55.4	87	30	21.38
Wagon.....	60.0	101	28	13.14
Wagon.....	51.3	86	24	47.98
Wagon.....	58.4	105	21	22.32
Wagon.....	58.3	101	22	62.29
Wagon.....	59.1	96	24	34.65
Wagon.....	58.8	102	21	14.38
Wagon.....	63.0	106	25	8.54
Wagon.....	57.8	100	22	11.24
Wagon.....	61.9	102	31	18.07
Wagon.....	62.4	105	30	11.54
Wagon.....	58.9	101	29	53.78
Wagon.....	58.8	103	26	20.06
Wagon.....	64.2	110	25	6.31
Wagon.....	58.8	102	22	17.05
Wagon.....	64.7	106	32	13.87
Wagon.....	60.6	101	26	34.30
Wagon.....	75.8	113	29	1.60
Wagon.....	57.8	92	28	23.75
Wagon.....	61.9	107	21	10.51
Wagon.....	56.6	104	—6	18.30
Wagon.....	55.2	86	28	15.96
Wagon.....	57.2	89	25	30.66
Wagon.....	62.9	104	30	10.43
Wagon.....	59.8	92	28	16.44
Wagon.....	60.8	96	26	18.59
Wagon.....	62.0	104	28	17.24
Wagon.....	65.3	110	30	7.34
Wagon.....	56.2	90	30	28.15
Wagon.....	56.0	100	30	21.60
Wagon.....	57.9	106	23	18.43
Wagon.....	58.2	100	28	25.65
Wagon.....	56.6	104	18	52.01
Wagon.....	65.7	110	30	8.87
Wagon.....	64.1	106	32	10.67
Wagon.....	63.6	108	28	24.45
Wagon.....	62.5	115	20	35.82
Wagon.....	60.8	109	26	11.55
Wagon.....	62.7	107	30	22.69
Wagon.....	64.5	110	28	23.57
Wagon.....	60.0	94	21	23.78
Wagon.....	54.8	95	30	16.08
Wagon.....	62.6	90	34	7.83
Wagon.....	64.5	108	26	10.95
Wagon.....	64.6	106	28	11.80
Wagon.....	67.1	111	28	9.35
Wagon.....	57.8	93	30	16.04
Wagon.....	54.9	86	30	21.45
Wagon.....	64.6	100	35	6.51
Wagon.....	65.6	106	32	12.88
Wagon.....	60.2	98	34	15.49
Wagon.....	59.7	93	32	25.30
Wagon.....	54.4	104	20	26.59

TEMPERATURE AND RAINFALL AT VARIOUS PLACES—Continued

STATIONS.	Mean Yearly Temperature.	Highest Temperature.
Santa Maria.....	58.0	92
Santa Rosa.....	56.2	100
Selma.....	63.8	107
Sims.....	54.8	106
Soledad.....	56.7	92
Spadra.....	64.0	108
Steeles.....	58.3	92
Suisun City.....	59.8	108
Susanville.....	51.0	100
Tehachapi.....	54.4	98
Tehama.....	64.4	112
Templeton.....	58.6	108
Traver.....	63.8	104
Truckee.....	43.6	92
Tulare.....	66.2	111
Turlock.....	63.4	106
Upper Mattole.....	56.9	106
Vacaville.....	60.7	107
Valley Springs.....	60.3	102
Vina.....	63.4	108
Volta.....	63.3	106
Walla Walla Creek (Fort Jones).....	48.8	94
Walnut Creek.....	58.9	113
Westley.....	65.8	106
Wheatland.....	59.5	106
Whittier.....	66.2	106
Williams.....	60.6	109
Willows.....	59.4	108
Winters.....	65.8	110
Woodland.....	60.1	100

CHARTS OF PACIFIC COAST CYCLONE TRACKS
PRECIPITATION.

By J. P. FINLEY, Lieutenant Signal Corps, officer in charge San Francisco Signal Station.

Generally speaking, the rainfall of a place is determined by its position relative to the course of cyclonic movements for its particular region. This statement is especially true of the Pacific Coast States. It is proposed to illustrate the fact by a cartographical representation of storm paths and precipitation for typical months of the year. The selected July, October, and December for the years 1889 and 1890 (see charts Nos. III, IV, V, and VI), because they present other features pertaining largely to excessive and deficient precipitation which are very important to invite attention to. The charts as prepared show the precipitation decimally, in inches, tenths, and hundredths, and the storm tracks in heavy black lines. The storm tracks are intended to show the course of movement of the centers of cyclonic disturbances. Owing to the lack of daily observations over the ocean and along the coast, from Washington, these paths can only be approximately traced. From October to April, inclusive, the cyclones generally deflect southward in their easterly course into Wash-

ington, but rarely into California, and then only in the extreme northern portion of that State. There appears to be no record of a cyclone center coming as far south as San Francisco. From July to September, inclusive, cyclonic disturbances all pass eastward of Washington. During these months the progressive easterly movement is at such a high latitude that it is impracticable to indicate on the charts used the location of the storm centers. The July chart shows those storms which came farthest south, by broken lines, to indicate that the paths thus designated are very uncertain as to their location. It is positively known that they did not come south into Washington, but just where they entered the coast and passed over the Columbia it is impossible to exhibit on existing charts, with data available.

This typical summer chart clearly shows the marked difference in the mode of easterly cyclonic movements, as compared with the conditions that prevail during the winter. The effect of this change in direction in the amount and distribution of precipitation is graphically shown in the charts accompanying this paper. To clearly understand these facts and appreciate what they demonstrate, it is important that the reader should be informed as to the place of origin of the cyclones of the Pacific Coast, and as to the development of these atmospheric disturbances in general. As the weather of a place depends upon atmospheric conditions developed to the westward of it, brought therefrom by the influence of cyclonic circulation and the rotation of the earth, we must look in that direction for the source of storm supply. The source of a storm is heat and moisture, and without an adequate and increasing supply of these elements cyclonic formation and all of its attendant features would fail of development or continuance.

In the North Pacific an abundant source of food supply for storms is found in the Japan current. It is over this vast stream of warm water, flowing through the ocean from west to east, that the air is set in motion by upward currents which are constantly forming from the accumulation of heat and moisture, and give the initiatory movement to cyclonic formation. These vast eddies in the air drift along under the influence of the general easterly trend of the atmosphere, growing in energy while they can keep near the source of food supply. Upon reaching the coast the Japan current is left behind, and the cyclones take their way over the continent with diminishing intensity until reaching the Mississippi Valley, when another source of food supply (the Gulf of Mexico) is made available, and later on the Gulf Stream. The influence of the great Mississippi Valley is enormous upon all storm movements from the north and west of that region. Upon the approach of an area of low barometric pressure from the Rocky Mountains the winds shift to southerly in the great valley, and vast volumes of warm, moist air are carried into the circulation of the cyclone. The configuration of the valley is such that the air is drawn to the northward by the peculiar circulation of the cyclonic disturbance, and the winds are necessarily heavily freighted with heat and moisture. Out of the Mississippi Valley, place in its stead great mountain chains, leaving the gulf, and raise the land to the elevation of the great western plateau, and the now garden spot of the world would become like the plains of Wyoming, Utah, and Nevada. Not less powerful is the influence of the Gulf Stream on the meteorological conditions and the climate of the Atlantic coast of this country.

There is no question as to development of cyclonic action in the Japan current. The logs of all vessels which have ever crossed that current furnish abundant evidence as to storm squalls, and high seas. Every one at all familiar with meteorology has some knowledge of the character of the furious typhoons in the Japan and Japan seas. These storms become, later on in their easterly course, the cyclones that sweep the coast of Alaska and British Columbia, and thence pass to the interior of the United States, some of which reach the north Atlantic, and even pass over Europe, preserving identity in a remarkable manner. Cyclonic formations have been traced entirely around the globe in the northern hemisphere. From a brief reference to cyclonic developments information can be drawn which will make the storm track lines on the accompanying charts more intelligible. To understand the relation of the distribution of precipitation to cyclonic formation and movement, it will be important to briefly consider the character of a cyclone in this respect. We may divide the cyclone into a disturbance, which usually varies from five hundred to fifteen hundred miles in diameter, into four quadrants, each of which will show certain features, described as follows: These quadrants have atmospheric characteristics which they maintain as long as the identity of the cyclone continues. The northeast quadrant is distinguished by great high winds, and heavy cloud formation, especially in the southern portion, together with precipitation. The southeast quadrant contains the maximum of heat and moisture; it is the region of all classed storms, especially the tornado. The southwest quadrant is characterized by clearing weather, with dashes of rain in the eastern portion, high temperature, and diminishing humidity. The northwest quadrant contains the minimum of heat and moisture, general absence of clouds, and cold winds. From the nature, then, of cyclonic formation, precipitation is confined to certain parts of the circulation which forms the area of lowest barometric pressure. The rain area extends to the south and east of the center three hundred to five hundred miles in advance of the cyclonic center. Generally speaking, the heaviest precipitation will occur near the center, modified more or less by local conditions.

As a cyclone approaches the northwest coast of this continent the rain area gradually extends southward into the Pacific Coast States. When the center comes southward into Oregon the rainfall will be heavier in California than in Washington. Under such circumstances the region is brought completely within the influence of the rain area of the "low," or cyclonic, area. This condition of cyclonic movement occurs only in what is called the "wet season," in California. In the "dry season" the cyclones move eastward at such high latitudes that the rain quadrants of the "low" do not reach further southward than Washington and northern Oregon, and in many cases only the southern edge of the rain area touches northern Washington. In the northern hemisphere storms move eastward at a lower latitude in winter than in summer, probably due to the apparent movement of the sun north and south of the equator. The earth, in passing through its orbit about the sun, receives the rays from that luminary at varying angles. In summer, in the northern hemisphere, the sun is less oblique, and therefore the heating effect is more pronounced. In winter the reverse condition prevails. The direction of cyclonic movement is largely controlled by the presence of heat and moisture. Cyclones find their food supply of these elements at a higher

latitude in summer than in winter. Therefore, their deflection southward is greater in winter. The natural course of the cyclones of the North Pacific is directly eastward from the northern portion of the Japan current. This line of movement, if continued, would carry the paths of the storm centers eastward over Hudson Bay, and thence to the Atlantic, and Labrador. After leaving the coast of British Columbia, in passing westward to about the one hundredth meridian, the cyclonic areas begin to feel the effect of the heat and moisture of the Gulf of Mexico, and then eastward in their course the Gulf Stream. The great Mississippi Valley affords a natural gateway for the sweeping northward of these immense masses of warm, moist air. Under this influence the cyclonic centers are drawn southward into the United States, and thence eastward across the Great Lakes, or at a lower latitude, over the Ohio Valley, reaching the Atlantic in the vicinity of 45 degrees north latitude. The course of the cyclones of the North Pacific is thus briefly defined, together with the conditions under which they are maintained, in their passage across the continent. We have also shown the connection between a moving cyclone and the consequent area of precipitation. It can be readily seen, then, that the rainfall of the Pacific Coast States depends upon the latitude, number, and intensity of the cyclones from the Japan current.

The cyclones come further south in winter than in summer, as before explained, hence the "dry season" from May to September, inclusive, which prevails generally over the region south of the forty-second parallel west of the one hundred and twelfth meridian. North of this parallel there is practically no "dry season," as northern Oregon and Washington have rain throughout the year, but more in winter than in summer, for reasons before given.

Reports from Alaskan stations show the effect of the passage of cyclonic areas throughout the year. The normal rainfall at these stations from May to September, inclusive, varies from 2.50 to 5.80 inches. In some instances the rainfall in May has been over 10 inches, in August nearly 7 inches, and in September over 13 inches; generally, the rainfall in winter is heavier than in summer, the normal being about 10 inches. When the cyclonic movement takes place at an abnormally low latitude, heavy rains occur in the Pacific Coast States and light rains in Alaska and British Columbia. In November, 1885, when the rainfall in Northern California was exceedingly heavy, varying from 6 to 14 inches, the rainfall at Alaskan stations was below the normal, from 1 to nearly 3 inches. In November, 1884, when the rainfall in the Pacific Coast States was decidedly below the normal, especially in California, where in many places no rain fell at all, the precipitation in Alaska was largely above the normal, Sitka reporting a fall of 16.31 inches. In November, 1883, the rainfall was very light and below the normal at all stations in the Pacific Coast States, while in Alaska it was heavy and above the normal. Sitka reported 10.63 inches, Atka 12.22, and Oonalaska 5.02. Alaska and the Aleutian Archipelago bear out what the same relation to cyclones entering British America from the North Pacific as do the Canadian maritime provinces to cyclones entering the North Atlantic from the United States. The former region may be called the port of entry and the latter the port of departure for the cyclonic movements of North America. The region south of the forty-second parallel, including California and the Middle Plateau, is entirely devoid of precipitation during the summer. There is

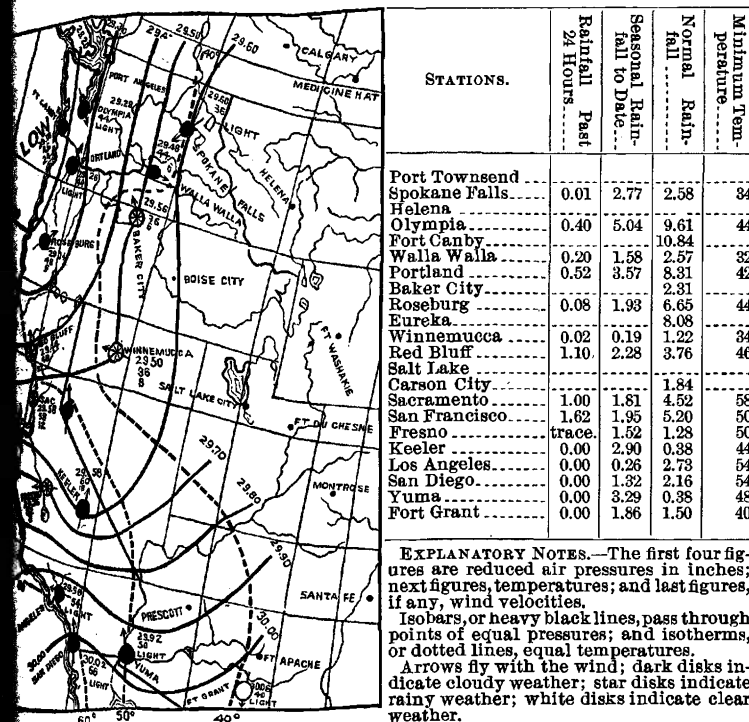
always more or less rain, according to the amount of snowfall in winter. The rain of summer, or what is called the "dry season," comes from the evaporation of snow. The light rains, occasionally this season, are the result of local conditions, and are not produced by the effect of cyclonic circulation in areas of low barometric pressure. The great masses of snow which collect upon the Sierras, the tops of which are in perpetual snow during the passage of the cyclones, form the only source of supply for the occasional rain of summer. No snow in winter means no rain in summer, *vice versa*. Remove the mountains from California and the regions, and that country would suffer severely from protracted droughts. Constant and rapid evaporation goes on from the snow-covered mountains, under the fierce rays of the mid-summer sun. Early in the day heavy cloud masses can be observed forming along the crest line of the ranges, and just after the hottest part of the day heavy collections of moisture, suspended in the air, gradually descend in the production of sudden downpours of rain, sometimes accompanied with heavy peals of thunder and vivid flashes of lightning. It is an uncommon thing for an observer to watch, from a mountain top, the entire process of evaporation, cloud formation, and rain descending on just below the level of his station. During the winter of 1889-90 the snowfall was extremely heavy in the Pacific Coast, as is well known. The melting of this snow during the spring and summer gave rise to heavy and disastrous floods, and severe local storms. In July and August there were an unusual number of severe local storms in California, Nevada, and Arizona. Palmetto, Nevada, in August, 8.60 inches were reported as falling in one hour, and 8.80 inches in about two hours, causing great damage to roads. At Tucson, Arizona, over sixty miles of railroad track was washed away during August.

The general uniformity of climatic conditions in the Pacific States, and the peculiar meteorological features of temperature and precipitation, are due, primarily, to the location and direction of movement of the Japan current. The weather and climate of a region are determined, principally, by their relation to the prevailing course of the movement. Reverse the course of the Japan current, the motion of the earth remaining the same, and California and the Middle Pacific States have the weather and climate of the South Atlantic and Indian States, rather than that of Spain and southern France. The importance of the Japan current as an adjunct in the development of knowledge of Pacific weather, and in increasing the reliability and extent of the weather forecasts and storm warnings, will be the establishment of telegraphic communication between the United States, British Columbia, and Alaska. We must receive telegraphic weather reports as far northwest as possible, along the coast of British Columbia, along the northern border of the Japan current. This great desideratum can be accomplished by connecting certain of the islands of the Alaskan Archipelago by cables and telegraph lines to Alaska, and thence to the United States along the coast of British Columbia. From these stations in mid-ocean the very inception of cyclonic development can be observed, and reports as to the progress and intensity of these storms can be sent to the central office in San Francisco several days in advance of their arrival on the California coast.

[Chart No. 1, Daily Weather Map.]

WAR DEPARTMENT WEATHER MAP.

(Published by authority of the Secretary of War.)

UNITED STATES SIGNAL SERVICE, DIVISION OF THE PACIFIC,
SAN FRANCISCO, CAL., December 3, 1890.

WEATHER FORECASTS FOR TWENTY-FOUR HOURS, FROM 8 A. M., 75TH MERIDIAN TIME, DECEMBER 3, 1890.

Northern California—Rain; high southerly winds; nearly stationary temperature, cooler in the Sacramento and San Joaquin Valleys and in western Nevada. Rain, heavy to snow, in the mountains.

Southern California—Threatening weather and rain; brisk southerly winds; nearly stationary temperature.

Oregon—Rain; fresh to brisk south to east winds, increasing to high along the coast; nearly stationary temperature.

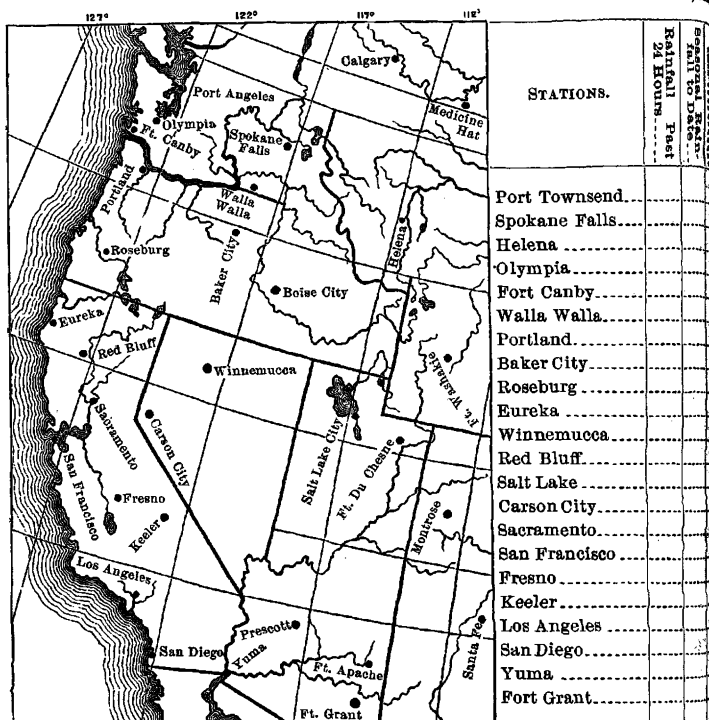
Washington—Fresh to brisk northerly winds, increasing to high on the coast; except nearly stationary temperature at Walla Walla.

DATA FOR TWENTY-FOUR HOURS ENDING AT 8 A. M., 75TH MERIDIAN TIME, DECEMBER 4, 1890.

Northern California—Rain; high southerly winds; nearly stationary temperature; maximum temperature, 58 degrees; minimum temperature, 34 degrees; rainfall, 1.67 inches.

[Chart No. II, Blackboard Weather Map.]

SIGNAL SERVICE WEATHER MAP.

BRANCH SIGNAL OFFICE, DIVISION OF THE
SAN FRANCISCO, CAL.

WEATHER FORECAST.

For Northern California.....

For Southern California.....

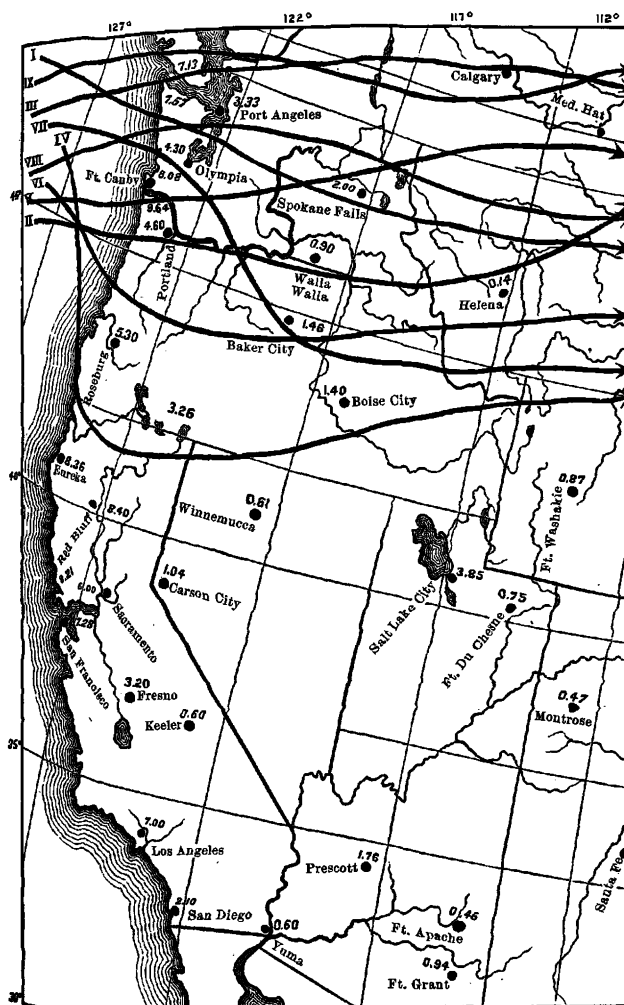
For Western Nevada.....

For Oregon.....

For Washington.....

[Chart No. III.]

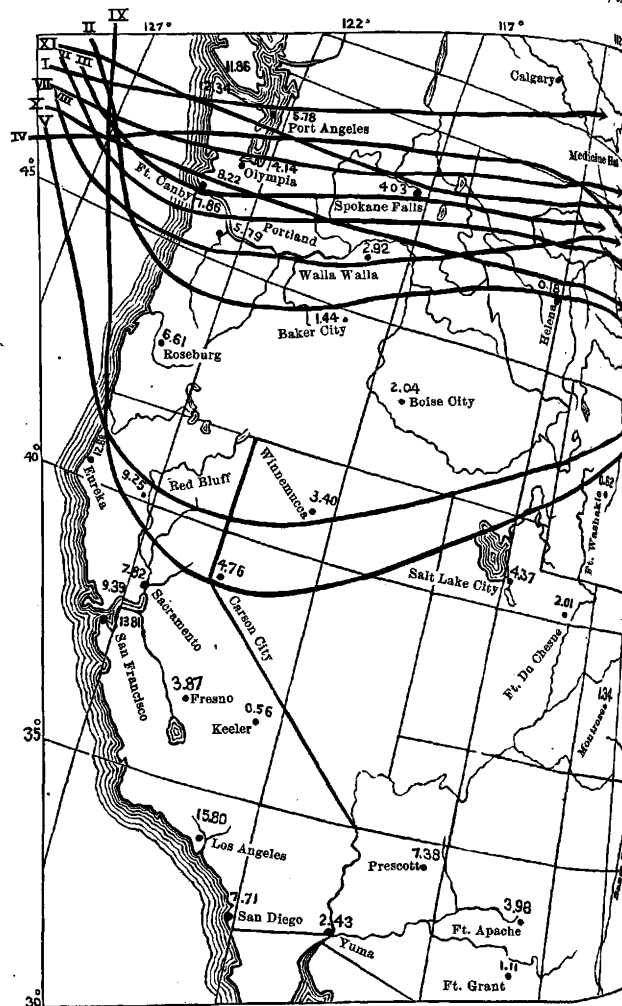
WAR DEPARTMENT WEATHER MAP.

UNITED STATES SIGNAL SERVICE, DIVISION OF THE PACIFIC,
SAN FRANCISCO, CAL.

PATHS AND RAINFALL, OCTOBER, 1889. BY LIEUT. JOHN P. FINLEY, U. S. A.

[Chart No. IV.]

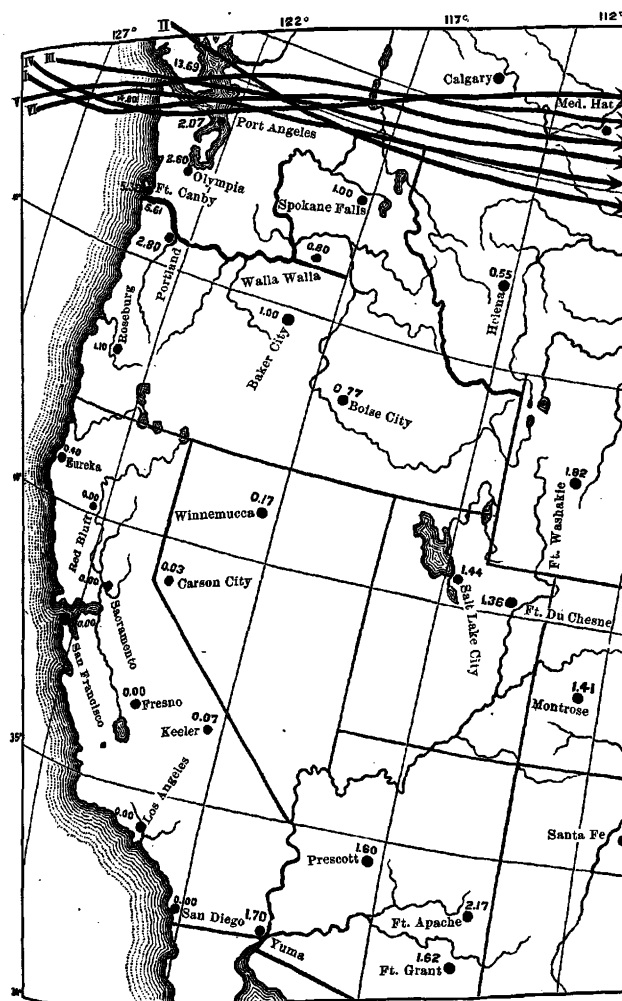
WAR DEPARTMENT WEATHER MAP.

UNITED STATES SIGNAL SERVICE, DIVISION OF THE
SAN FRANCISCO, CAL.

STORM PATHS AND RAINFALL, DECEMBER, 1889. BY LIEUT. JOHN P. FINLEY.

[Chart No. V.]

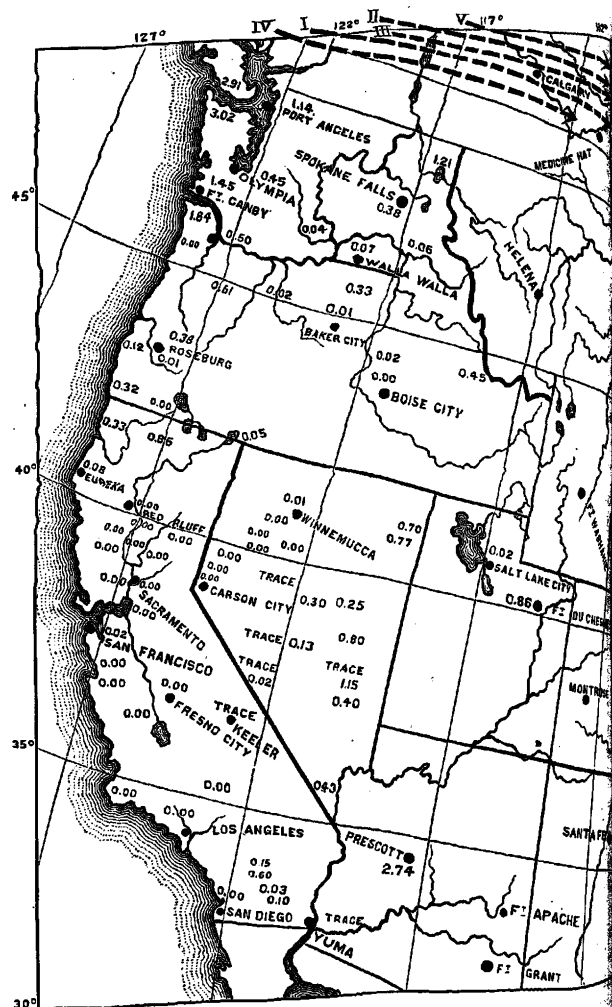
WAR DEPARTMENT WEATHER MAP.

UNITED STATES SIGNAL SERVICE, DIVISION OF THE PACIFIC,
SAN FRANCISCO, CAL.

STORM PATHS AND RAINFALL, OCTOBER, 1890. BY LIEUT. JOHN P. FINLEY, U. S. A.

[Chart No. VI.]
WAR DEPARTMENT WEATHER MAP.

UNITED STATES SIGNAL SERVICE, DIVISION OF THE
SAN FRANCISCO, CALIF.



STORM PATHS AND RAINFALL, JULY, 1890. BY LIEUT. JOHN P. FINLEY.

THE BLACKBOARD WEATHER MAP.

J. P. FINLEY, Lieutenant Signal Corps, officer in charge San Francisco Signal Office.

One of the most important considerations in the preparation of weather information for the public is to secure graphic representation. Weather information is necessarily more or less technical, and the various elements of weather are of most practical value to the public should be presented in a way to make them readily understood and applied. The value of the information collected and published depends very largely upon the readiness with which the people can comprehend the information. A small paper bulletin has been the usual form for displaying in public places the forecast, tabulated data of temperature, barometric pressure, wind direction, wind force, and precipitation. Since the establishment of the Signal Service Station at San Francisco, in February, 1871, no radical change has been made in the old form of bulletin display until the appearance of the blackboard weather map. The bulletin serves the purpose, as a matter of necessity, where stations are located in small towns. In large cities, where commercial interests are extensive, and the uses made of weather data are numerous and important, it is imperative to supersede the old bulletin with more comprehensive and conspicuous representation.

Seeing the urgent need for a change in this direction, I gave considerable attention to the development of a scheme which would realize the object sought. As the result of this effort I devised the blackboard weather map, a representation of which is shown by Chart No. II. It consists of three parts: (1) the map, (2) the tabulated data, and (3) the weather forecasts. On the map there appear wind direction, wind velocity, weather, and isometric lines of barometric pressure, showing the position of the low (cyclone) and high (anti-cyclone). Wind direction is indicated by arrows, which fly with the wind, and velocity is shown, in miles per hour, by figures placed near each station. The weather is indicated by a large R for rain and a large S for snow, placed near the station. Fair weather is indicated by an absence of these symbols.

The tabulated data comprises only precipitation and temperature. These are the two weather elements in which Pacific Coast people are most interested, and this is quite true of all sections of the country. In the tabulated statement principal attention is given to precipitation, and for obvious reasons. There is shown the current rainfall for the twenty-four (24) hours, ending at the time the report is issued; rainfall of the month to date, giving the change in this amount from day to day, and the average amount for the current month. By this means there is afforded opportunity to obtain at a glance information as to the various causes of rainfall which are of most interest.

The size of the blackboard weather map is such that a large number of people may observe every portion of it at the same time, without interference to one another. It measures five (5) by seven (7) feet, and the suitable arrangement of colors secures a clear presentation of every detail. The ground work is black, and the board well slated. The writing is in light yellow, which stands the weather well and appears

distinctly in sunlight or shadow. The map is outlined in blue, other lines, for purposes of division and tabular arrangement, in white. The entire board is inclosed in a deep molding, painted black, except a small stripe in light red on the interior portion. The board may be used for displaying either the morning or the evening reports, or both. In using the morning reports the temperature will show the readings of the minimum thermometer, and, in using the evening reports, the readings of the maximum thermometer.

Upon the introduction of this blackboard weather map in San Francisco, decided interest was manifested by the people. Boards were quickly purchased and placed in position at the following places: Palace Hotel, office of the "Examiner," Produce Exchange, Merchants' Exchange, Board of Trade, Mercantile Lunch, Light California Hotel, and the central offices of the Southern Pacific Company. The necessary data for preparing the boards are furnished daily from the Signal Office, and at each place a person is appointed to care for the board. In some instances considerable skill is shown in drawing the map, all of which is well appreciated by the public, and adds much to the usefulness of the scheme.

THE DAILY WEATHER MAP.

By J. P. FINLEY, Lieutenant Signal Corps, officer in charge San Francisco Signal Station.

Cartographical representation is indispensable in meteorological investigation. The fact that cyclonic and anti-cyclonic disturbances continually embrace large portions of the earth's surface, and that it is necessary, in studying their development and movements, to make observations to be made at the same moment of actual time, and the imperative need of specially prepared charts, on which the observations shall be entered and discussed. By the aid of the chart a panoramic view is afforded of the entire region from which reports are received. The student must quickly grasp an accurate knowledge of atmospheric conditions over the whole region, as a unit, and not confine himself to any one small part. Such a comprehensive study affords a basis for the preparation of weather forecasts, and is absolutely indispensable to the prosecution of this very important feature of meteorological work. Without the daily map weather forecasts would be impossible, even for a single locality, as the weather of a place depends upon atmospheric conditions developed several hundred miles to the westward of it, which are gradually progressing eastward. On the appearance, in February, 1871, at the office of the Chief Signal Officer at Washington, D. C., this important adjunct to a knowledge of meteorology was confined to the study room, and the general public knew nothing of its peculiarities and advantages. In 1873 arrangements were taken to provide for the publication and sale, in a limited number, of the daily weather map, but this only placed the charts in libraries and scientific institutions. In May, 1879, arrangements were made with the Chief Signal Officer whereby the daily map was published

at a small space of time, in one of the New York (The Graphic) illustrated papers. The scale was extremely small, and resulted in crowding the weather data to such an extent as to make its reproduction almost impossible, thereby defeating the purpose of the work. The data for the map was telegraphed, by means of a special cipher, from Washington to New York, which involved some difficulties that were also instrumental in terminating the publication of the map. Upon its discontinuance in the New York paper several attempts were made, voluntarily, by some of the western papers, to publish portions of the daily weather map, but under different arrangements for receiving the data.

In 1887, at about thirty of the larger Signal Service Stations, the use of the tri-daily manifold bulletins was replaced by the morning weather map. Telegraphic reports were collected at each of these stations from the region of country which would best serve the commercial interests of the center of publication and distribution. This arrangement would naturally result in the printing of a special map at each station, embracing a particular portion of the United States. The introduction of this change in the method of furnishing weather information, for the use of the general public, met with instant success and hearty appreciation. It was like passing from darkness into sunlight. The monotonous columns of figures on the bulletin were transformed into a novel, graphic, and interesting picture. Quickly the most ignorant began to comprehend the panoramic view before them—the formation of areas of rain or snow and fair weather, the areas of high and low barometer, the movement of warm and cold waves, the uniformity of wind direction over vast regions, and the extent and character of general atmospheric disturbances within the region comprised in the chart. The weather map not only gives all this important information, but by a preservation of the files there is afforded a volume for reference which presents a daily photograph of the weather of any region under consideration. As strongly attesting the popularity and usefulness of the weather map, the report of the Chief Signal Officer for 1890 shows that the publication of the daily weather chart at stations of the Signal Service has increased from fifty-two thousand copies in 1880, to eight hundred and seventy-six thousand in 1890, exclusive of the publication at Washington, which increased from one hundred and fifty-six thousand to one hundred and ninety-three thousand during the same period.

During the prolonged effort to secure the daily publication of a weather map for the East, no similar action appears to have been taken for its introduction on the Pacific Coast. Since the opening of the Signal Service in 1871, at San Francisco, the manifold bulletin has been the means of publication and display in the distribution of weather forecasts. The Pacific Coast weather forecasts were begun in 1885, and have been continued regularly thereafter, the means of publication being the small manifold bulletin, and through the newspapers. It occurred to me that the preparation of a special weather map for the Pacific Coast States should not be longer delayed, and I therefore set to work to accomplish the desired result. In August, 1890, I submitted a set of drawings, to the Chief Signal Officer at Washington, D. C., which were fully approved of the scheme. The result is shown in miniature in the accompanying Chart No. I, which displays the weather conditions

in the Pacific Coast States on December 3, 1890. The headings are sufficiently explicit to show the character of the data published on the map which is issued twice daily, at 9:30 A. M. and 6:30 P. M. The map is about twelve by fourteen inches. On the charted map are shown the areas of high and low barometric pressure, barometric thermometer readings at all stations, precipitation, wind direction, velocity, and the state of weather. At the outset the daily edition is limited to fifty copies, but this may be increased as urgency of publication is developed. Already much interest has been manifested in this publication by those who have become acquainted with its practical advantages. As the work becomes more generally known and understood on the Pacific Coast, deeper and more intelligent use will be taken by the people in the daily collection and use of weather information over large areas of country. The weather map, which is now used, will become the means of educating the popular mind in a practical knowledge of weather science. It should become as generally used as the newspaper, and as practical for purposes of navigation. It should be so well understood that every reader of it could apply its information to his daily business with advantage. It is not too much to say or expect of the weather map, and the already accomplished in the East abundantly testify to the high ability of such a future for it.

SOME INFORMATION AS TO THE WORK OF THE BRANCH SIGNAL OFFICE AT SAN FRANCISCO

By J. P. FINLEY, Lieutenant Signal Corps, officer in charge San Francisco Signal Office

The Branch Signal Office was established under orders of the War Department, dated January 6, 1885, and is the only Signal Service office of its kind in the country. It is the most important office of the States Weather Bureau outside of the Central Office at Washington, D. C. After careful consideration, it was decided by the Chief Signal Officer that the needs of the Pacific Coast required the establishment of such an office, where telegraphic weather reports from a large number of stations could be received several times daily, from a study of which weather forecasts could be made and distributed to the public. It was also deemed advisable to issue special forecasts of rain, high winds, and frosts, and to order the display of cautionary and storm signals at seaport cities, for the benefit of maritime interests. Since the establishment the Branch Signal Office has been growing in importance yearly, and the people have responded with unfailing support and appreciation. Time and study have clearly shown the value of the Chief Signal Officer in providing for an independent office on the Pacific Coast, from which could issue special predictions for the region and where opportunity could be afforded for direct and intelligent study of meteorological problems affecting a region having peculiarities of atmospheric conditions separating it from the remainder of the country. The distance is so great from the source of central

Washington that, even with the aid of the telegraph, the expense and delay of communication would frequently operate as a serious obstacle to rendering some important service to commercial interests.

The difficulty may be lessened in time by enlarging and increasing telegraphic service between the East and the West, but at present a thoroughly competent representative of the United States Weather Bureau, with adequate authority to act and advise for the benefit of the people, is certainly required. The people should not only receive benefit from the formal daily forecasts of the weather, but efforts should be made to educate them by proper publications, which will show them how to understand the methods pursued in weather investigation, and how to derive the best results from the information furnished.

The most important work performed at the Branch Office is weather forecasting and the study of the meteorological conditions and other peculiarities of the region for which the forecasts are made. The officer in charge, however, occupies a dual position, in which he not only personally superintends the weather work of the Pacific Coast States, but also has personal charge of the military telegraph lines and cables of the Division of the Pacific. The duties are largely combined as a matter of necessity, because telegraphic communication is maintained over government lines, between certain points, for the purpose of collecting weather reports, as well as for purely military purposes.

Upon the establishment of the Branch Signal Office the weather forecasts were prepared for special districts, designated as follows: "North Pacific Region," including Oregon and Washington; "Middle Pacific Region," embracing Northern California and western Nevada; "South Pacific Region," embracing Southern California. In July, 1888, this division into regions was changed, and forecasts were ordered made for districts, in which the name of the State should be given, and the predictions confined to that area. It was also permitted to designate in the forecasts any particular part of the State, as: "the northeast portion," "the extreme northwest portion," "along the coast," "in the interior," etc. While compelling more exactness in the work, this plan also provided for the use of familiar terms in referring to geographical divisions, so that the people could more readily apply the information contained in the forecasts. It is probably not generally known that there is a region of country in the United States for which weather forecasts have never been made. It embraces Arizona, New Mexico, Utah, western Colorado, Wyoming, Idaho, and Montana. Although telegraphic weather reports are received from this region, and Signal Service stations have been established there for many years, the commercial and agricultural interests are not sufficiently developed to demand special weather forecasts. At the Branch Office four weather charts are prepared twice daily, at 9 A. M. and 6 P. M., from a study of which general and special weather forecasts and storm warnings are made. The reports for the preparation of these charts are received from the various Signal Service stations in Arizona, California, Nevada, Oregon, and Washington.

Chart No. 1 shows for each station the current temperature, barometric pressure reduced to sea level, current wind velocity, wind direction, state of weather, precipitation, and maximum wind velocity since last regular report. Isotherms are drawn in blue for each 10 degrees of temperature, in full lines, and, when doubtful, in broken lines. Isobars are drawn in red for each tenth of an inch of barometric pressure, in full

lines; when doubtful, in broken lines, and designated by the plus and minus signs. The words "high" or "low" are so placed as to show the relative barometric condition of the regions marked.

Chart No. 2 shows for each station the twelve and twenty-four hour changes in barometric pressure, the differences being expressed algebraically with the signs of plus and minus. The departure from the normal is also shown for each station in the manner above indicated. Lines in blue, drawn for each tenth of an inch, represent the twelve-hour changes, and those in red the twenty-four-hour changes. Lines in black may be used to indicate the plus and minus changes from the normal barometric pressure.

Chart No. 3 shows for each station the twelve and twenty-four hour changes in temperature; also, the departures from the normal temperature. Lines in blue, drawn for each 10 degrees of temperature, represent the twelve-hour changes, and those in red the twenty-four-hour changes. Lines in black may be used to indicate the plus and minus changes from the normal temperature at each station.

Chart No. 4 shows for each station the minimum temperature at the morning report, and the maximum temperature at the evening report, the kind and extent of clouds, both upper and lower; the dew point, the twenty-four-hour change in minimum temperature, and the four-hour change in maximum temperature. Lines in red represent the temperature changes for each 10 degrees.

The weather forecasts embrace general forecasts for each State, forecasts for localities, and storm warnings for the benefit of the coast cities. The special forecasts consist of rain warnings, fog warnings, and forecasts of weather and temperature. Any town or locality entitled to receive these special predictions by telegraph at Government expense, providing the weather and temperature flags of the Signal Service are furnished and displayed for the benefit of the public. In some instances newspapers have been furnished the forecasts at Government expense by providing cuts of the signal flags and printing them with the telegraphic message in their daily issue. This is almost equivalent to displaying the flags. Individuals can receive telegraphic forecasts for their *personal* use on payment of the cost of the telegram. Besides the preparation of the general weather forecasts for States, made twice daily, special forecasts are sent daily to different places in the Pacific Coast States. Storm warnings are furnished to seven stations in California, Oregon, and Washington. Rain warnings are furnished during the raisin-making season to places in California. These warnings prove of much practical value, and many testimonials have been received at the Branch Office attesting this fact and the appreciation of the public.

The following changes and improvements have been effected at the Branch Signal Office by the present officer, Lieutenant Finley, since he assumed charge in July, 1890:

First—The combination of the observer's office with the Signal Office, and the establishment of one general office in more convenient quarters, which are better adapted to the work of the Signal Service. A change of an excellent exposure is obtained for the instruments, and the observations are collected together on one platform, made easy of access, and delay to the observer as little as possible in taking his observations. The old station in the Merchants' Exchange the instruments

were scattered about the roof and tower of the building, and no change of importance had been made in twenty years. The present location of the general office, in the Phelan Building, affords many advantages, not the least of which relate to the instruments, their elevation being increased over fifty feet, and altogether made much more convenient of access. The combination of the two offices has resulted in the accomplishment of more work and better service to the public.

Second—The classification and binding of the large accumulation of reports, making them much more accessible for study and the use of the public.

Third—The preparation of a special daily weather map of the Pacific Coast States, to be printed daily for the use of the public, at Government expense.

Fourth—The preparation of a blackboard weather map to display the daily weather conditions of the Pacific Coast States, for the benefit of commercial and maritime interests in San Francisco.

Fifth—The adoption of a local rain signal for the use of the fruit growers of California. This new signal is of the same size as the other weather flags, but the colors are arranged to make it half blue and half white, and thus indicate light rain or showers. The blue flag indicates heavy rain, and the white flag fair weather. It was very important, especially to those engaged in making raisins, that distinction should be made in the weather signals, so that a light rain or passing shower could be distinguished from a heavy or continuous rain.

Sixth—Securing the coöperation of the press of the Pacific Coast States in publishing the reports of the Branch Signal Office, and in furnishing space in their papers to aid in the collection of local meteorological data within reach of the regular Signal Service stations. Over one hundred and fifty papers responded to this invitation, coming from Arizona, California, Nevada, Oregon, Washington, and Idaho. Most of the papers are published daily, and thus the collection at the Branch Office is very large and exhaustive. An examination of this immense mass of printed matter shows a constantly increasing interest in weather forecasts, and a most encouraging growth in a knowledge of how to apply and make the best use of the large amount of weather information collected and distributed by the General Government and State organizations.

Seventh—Increasing the scope and augmenting the distribution of the daily weather review issued by the Branch Signal Office. The number of copies published has increased from twenty to nearly two hundred monthly. The review is published by the press throughout the Pacific Coast States.

Eighth—Connecting the Branch Signal Office by long distance telegraph with all parts of California reached by these instruments, through the San Francisco Central Telephone Office. This arrangement was made for the distribution of weather forecasts outside of San Francisco, for the benefit of the public, and was effected through the courtesy of the Telephone and Telegraph Company, which organization agreed to coöperate with the Signal Service in distributing weather forecasts throughout California.

Ninth—Connecting Point Reyes Lighthouse, Cal., direct with the Branch Signal Office, so as to furnish vessel and weather reports from that station to the Merchants' Exchange of San Francisco, with the

least possible delay. This arrangement has been of great value in furnishing prompt reports of vessels in distress, and securing aid for them, saving both life and property. A notable instance was the rescue of the British ship *Jessomene*, with the entire crew, during a storm of February 22, 1891, near Point Bonita, California, the vessel valued at \$200,000.

Tenth—Connecting the Branch Signal Office by telegraph, through the Western Union, with all parts of the Pacific Coast, and thus providing the means of receiving, by wire, at the Signal Office the weather reports from all Signal Service stations. This arrangement aids materially in the preparation of the daily forecasts.

Eleventh—Connecting the Branch Signal Office with the Postal Telegraph Company, so as to receive by wire special weather reports from their agents at over twenty places in Oregon and California. Reports are received each morning at 8:30 A. M., and are used in furnishing special rain data to the public.

Twelfth—Arranging with the officials of the Southern Pacific Railroad Company to receive their morning weather report by 9 A. M., from a hundred stations in Nevada, California, and Arizona. The information thus gathered is furnished in various ways to the public.

Thirteenth—Arrangements made to furnish special weather reports by telephone to about twenty places in San Francisco.

Fourteenth—Arrangements perfected to connect by telegraph cables all the military posts in and about San Francisco with the Signal Office, thus establishing communication between the post and harbor, and those on the mainland, with army headquarters.

Fifteenth—The issue of special weather bulletins to the press in the event of unusual meteorological conditions existing in the Pacific States. These bulletins afford explanations and more detailed information than can be given in the regular synopsis and forecasts.

Sixteenth—The issue of circulars to the press for the purpose of explaining the use of technical meteorological terms, and to describe the character of various meteorological phenomena, especially those pertaining to the meteorology and climatology of the Pacific Coast. The object of these circulars is to furnish information to the public which will better enable them to make practical use of the weather information distributed by the Government.

METEOROLOGICAL BULLETINS.

By J. P. FINLEY, Lieutenant Signal Corps, officer in charge San Francisco Signal Office.

In view of the many inquiries received at this office relative to the meaning and significance of technical meteorological terms, and for information as to the character of the various forms of atmospheric disturbances recognized by the science of meteorology, it has been deemed expedient to prepare for publication, through the press, a series of circular bulletins which will briefly, but yet comprehensively, furnish the public with data. It is believed that this plan will serve to instruct the public on an important subject, and assist in making the daily weather reports of more practical value.

BULLETIN No. I.

THE CYCLONE.

SIGNAL SERVICE U. S. ARMY, DIVISION OF THE PACIFIC, }
SAN FRANCISCO, CAL., January 27, 1891.

About fifty years ago, Piddington, of Calcutta, East India, first applied the term "cyclone" to all circular storms of whatever area. The word comes from the Greek "cyclos," which signifies, among other things, a coil of a snake. Its application to the most important of all meteorological disturbances is not intended to affirm that the area described by the storm is a true circle, but rather expressing sufficiently the tendency of the air to a circulatory motion. The word is now adopted by the leading meteorologists of the world as properly designating a certain and well defined class of atmospheric phenomena.

The cyclone is a broad disturbance, having a diameter of from three hundred to five hundred miles, and sometimes one thousand miles. It is a vast eddy in the atmosphere, and moves along in that medium very much as the eddies in a stream of water. The air does not have an actual circular motion at any place within the disturbed area, but only a tendency to spiral movement. Even this tendency is not revealed by reports from a single station. It is necessary to obtain observations from the entire area of disturbance, which, when plotted on a chart, disclose the general movement of the air, gradually inward toward the center, where it rises to the upper cloud region and flows outward on all sides. This motion of the air gives rise to westerly winds south of a cyclonic center, southerly winds on the east, easterly winds on the north, and northerly winds on the west. At the center of the area there is a calm space ten or fifteen miles in diameter, known as the "eye of the storm." This is a very dangerous part of the cyclone for vessels to encounter, as they become motionless and are then suddenly caught at the disadvantage by the rear of the storm. The barometer is lowest at the center and increases in height outward to the circumference. The shape of the cyclonic area is either circular or elliptical, generally the latter. The direction of progressive movement is from west to east, under the influence of the rotation of the earth, and while not directly apparent in the passing changes of the weather. The rate of movement is, on the average, about thirty miles per hour, being most rapid in winter, with a maximum of fifty miles, and least rapid in summer, with a minimum of about ten miles.

The four quadrants of a cyclone have distinct and invariable characteristics, as follows: In the northeast quadrant, great humidity, high clouds, precipitation, and heavy clouds, especially in the southern portion. In the southeast quadrant, the maximum of heat and moisture, and the region of all classes of local storms, especially the "tornado." In the southwest quadrant, clearing weather, with dashes of rain in the northern portion, falling temperature, and diminishing humidity. In the northwest quadrant, the minimum of heat and moisture, general absence of clouds, and brisk, cold winds. Some cyclones may preserve their identity in passing entirely around the earth, but the generality only travel about one third of that distance, and then disappear in the general circulation of the atmosphere.

The words "gale," "storm," "hurricane," "tempest," "typhoon,"

"breeze," etc., define the *strength* of the wind in a cyclone, but describe the general disturbance which gives rise to rain, clouds, atmospheric electricity, and variable conditions of heat and cold. This great disturbance, having a well defined area, direction of movement, and velocity of progression, is properly known as a cyclone.

The following scale shows that the above terms relate to the force of the wind, and should not be employed to designate a general disturbance like the cyclone and anti-cyclone:

SIGNAL SERVICE SCALE OF THE FORCE OF THE WIND.

Calm, 0. No visible horizontal motion to inanimate matter.
 Light, 1 to 2 miles. Causes smoke to move from the vertical.
 Gentle, 3 to 5 miles. Moves leaves of trees.
 Fresh, 6 to 14 miles. Moves small branches, and blows up dust.
 Brisk, 15 to 24 miles. Good sailing breeze, and makes white caps.
 High, 25 to 39 miles. Sways trees, and breaks branches.
 Gale, 40 to 59 miles. Dangerous for sailing vessels.
 Storm, 60 to 79 miles. Prostrates exposed trees and frail houses.
 Hurricane, tempest, or typhoon, 80 or more miles. Prostrates everything.

BULLETIN No. II.

THE ANTI-CYCLONE.

BRANCH SIGNAL OFFICE,

SAN FRANCISCO, CAL., February 19,

The employment of this term for meteorological purposes follows the use of the word cyclone. The prefix "anti" indicates the existence of a circulatory system in the air directly contrary to that which prevails in the cyclone. As the circulation of the air in an anti-cyclone differs widely from those of the cyclone, so also are the phenomena of an opposite nature. The anti-cyclone is an area of high barometer, in which the atmospheric pressure is decidedly above the normal. The highest pressure is at the center, and diminishes outward to the circumference. The circulation of the air is outward from the center. The air does not attain a circular motion anywhere within the area, and the tendency to a spiral movement is disclosed when the whole disturbance is charted and observations at every quarter are available. The circulation of the air in an anti-cyclone gives rise to westerly winds on the north side of the center, easterly winds on the east side, easterly winds on the south side, and westerly winds on the west side. The four quadrants of an anti-cyclone are distinguished as follows: In the northeast quadrant, clear, cool weather, with winds of moderate force. In the southeast quadrant, cold wave, with the lowest temperature, clear, dry air, and high barometer. In the southwest quadrant, fair, cool, pleasant weather, with light winds and haze. In the northwest quadrant, increasing temperature, increasing humidity, cloud formation, and threatening weather.

The front of an anti-cyclone is the extreme rear of a cyclone. The extreme rear of an anti-cyclone is the front of a cyclone. The air moves downward and outward in an anti-cyclone, and inward and upward in a cyclone. The air which flows outward from the top of a cyclone is cold and dry, because deprived of its heat and moisture in the descent.

rain or snow. This air descends toward the earth's surface and gives rise to the formation of the anti-cyclone. There is always an anti-cyclone between two cyclones, both of which are feeding the former and maintaining its identity. The cold weather of an anti-cyclone is partly due to the descent of cold air from above, the horizontal flow of cold air from northern regions, and the effect of radiation, which is greatly augmented by the absence of vapor and clouds. The area of the anti-cyclone is frequently greater than that of the cyclone, and its form less regular. An anti-cyclone is synonymous with clear, cool weather, moderate winds, and a cold wave; and cyclone, with cloudy weather, rain or snow, high winds, and a warm wave. The word "high" on the weather map indicates the area of an anti-cyclone, and the word "low" the area of a cyclone. Both disturbances are beneficial and necessary to the prosperity of mankind.

BULLETIN No. III.

THE TORNADO.

SIGNAL SERVICE U. S. ARMY, DIVISION OF THE PACIFIC, }
 SAN FRANCISCO, CAL., February 26, 1891. }

This storm is the most violent and destructive of all atmospheric disturbances. The derivation of the term has peculiar significance. The Latin word is *tornare*, to turn, or in other words, a whirling wind. The Spanish and also the Portuguese term is *tornada*, which means to turn, or turn upon itself. An effort appears to have been made to coin a word that would convey the idea of a small whirling, cylindrical cloud, accompanied with much violence. The word tornado has no certain derivation. About three centuries ago it possessed practically the same meaning that it has to-day. Over two hundred years ago Spanish seamen reported their experiences with tornados (waterspouts) on the northwest coast of Africa. From the knowledge acquired by the early seamen we trace the use of the word tornado to England thence to the English colonies in America. As early as 1682 we find the record of a tornado at New Haven, Conn., June tenth, at 2:30 p. m. A minute and very interesting description was prepared and preserved of its peculiar features, which reads as if the storm occurred yesterday. The conditions of tornado development are: (1) An unstable state of the atmosphere which occurs in the cloud regions; (2) opposing movement of warm, moist, and cold, dry air currents, the warmer overflowing the former; (3) the existence of a gyratory motion in the air relative to some central point.

The regions most favorable for the occurrence of tornadoes are the Mississippi, Missouri, and Ohio Valleys, and the Gulf and South Atlantic coasts. Tornadoes are confined almost entirely to the summer season, the months of greatest frequency being April, May, June, and July. The month of greatest frequency is May. It may be generally stated that tornadoes do not occur in the United States west of the one hundredth meridian. This storm is practically unknown in California. A tornado invariably assumes the form of a funnel-shaped cloud, the lower end drawing near to or resting upon the earth. The cloud and the air beneath it revolve about a central vertical axis with incon-

ceivable rapidity, and always in a direction contrary to the motion of the hands of a clock. The average width of the path of destruction is about eighty rods. The wind velocities of the tornado are from one hundred to eight hundred miles per hour. The tornado almost invariably occurs in the afternoon, just after the hottest part of the day. The hours of greatest frequency are from 3 to 5 p.m. A tornado passing over a body of water gives rise to what is called a waterspout. No building, however constructed, can resist the violent driving and uplifting winds of the tornado's vortex. The average length of a tornado's path is about twenty-five miles. The general direction of movement is from southwest to northeast. The tornado is a local storm, and always destructive.

BULLETIN No. IV.

SOME IMPORTANT FACTS ABOUT THE CLIMATE OF OREGON AND WASHINGTON

SIGNAL SERVICE U. S. ARMY, DIVISION OF THE PACIFIC,
SAN FRANCISCO, CAL., March 11, 1891.

The geographical position of these two States is a most fortunate one. Located in the latitude of the easterly trend of the central portion of the Japan current, they receive the full benefit of the warmth and moisture continually rising from this great stream. The atmospheric conditions of these areas of low barometric pressure forming over the Japan current *the continent throughout the year* in a manner to provide a most beneficial distribution of rain. The relation of the two great States to the Japan current is one of vital importance to their commercial and agricultural interests, and should be clearly understood by the people. Reverse the direction of this current so that its motion in the equatorial zone becomes westerly, and in the temperate zone easterly, and shift its latitude a few degrees to the south, and the North Pacific Coast States would become as barren and bleak as northern Canada and Labrador. A great factor, then, in the development of a country, is the amount of heat and moisture.

The following is a brief summary of the atmospheric effects of the Japan current on the climate of the North Pacific region:

1. A general equability of temperature unequalled in any other portion of the United States.
2. A gradual change from the heavier rains of winter to the lighter rains of summer, giving rise to a most beneficial distribution of precipitation throughout the year.
3. In winter the atmospheric disturbances from the Japan current move eastward at a lower latitude than in summer, and this difference north and south of the storm centers makes the difference in the amount of precipitation between the two seasons. But as the change of the centers is so great respecting Oregon and Washington, these States are always in the area of precipitation accompanying the low-pressure areas.
4. A prolific growth of all forms of plant life.
5. Climatic conditions which favor to a marked extent the growth of the most cereals and other important staple crops.

6. The alternation of rain and fair weather in such a manner as to provide most suitable conditions for planting and harvesting.
7. The absence of excessively violent storms, owing to the southwestward deflection of the Japan current at the parallel of 45 degrees north; the Alaskan current along the California coast, and the dry atmosphere of the Middle Plateau region.
8. Computed from the records of nearly twenty stations, covering a long series of years, the percentage of rainfall in Washington varies from 15 per cent in August to 15.70 per cent in January.
9. Computed from the records of twenty stations, covering a long series of years, the percentage of rainfall in Oregon varies from 1.25 per cent in August to 17.10 per cent in December.

BULLETIN No. V.

SOME FACTS ABOUT WEATHER FORECASTS.

SIGNAL SERVICE U. S. ARMY, DIVISION OF THE PACIFIC,
SAN FRANCISCO, CAL., March 18, 1891.

The Branch Office of the National Weather Service, Division of the Pacific, was opened at San Francisco, March 1, 1885, and is the only office of its kind in the country outside of the Central Office at Washington, D. C. It was established for the purpose of providing, in the most direct and practical manner, an opportunity for the people of the Pacific Coast to receive all of the benefits that should be derived from the work of the Signal Service. The main object was to prepare and distribute, through the press and by telegraph, weather forecasts for the Pacific Coast States, and warn vessels of the approach of storms dangerous to shipping off the coast; also, to make special forecasts of rain, frosts, fogs, and local storms. Such work had been carried on at the Central Office in Washington many years, for the eastern portion of the United States, and it was believed that the time had come for the organization of a Pacific Coast Weather Service, with headquarters at the metropolis of the coast, and at a place centrally located, for the convenient receipt and distribution of telegraphic reports.

To properly apply the weather forecasts to definite areas of country, the Pacific Coast was divided into three districts, designated officially, as follows: North Pacific Region, embracing western Oregon and western Washington; Middle Pacific Region, embracing the western portion of California north of parallel 37 degrees north, or an east and west line passing the northern edge of the bay of Monterey; South Pacific Region, embracing the western portion of California south of parallel 37 degrees north.

On May 1, 1886, an order was issued from Washington changing the districts to State areas, and thereafter the weather forecasts were made for the following regions: Washington, embracing the entire State; Oregon, embracing the entire State; Northern California, embracing that portion of the State north of the latitude of 36 degrees, or an east and west line passing through the central portion of Lake Tulare; Southern California, embracing that portion of the State south of the latitude of 36 degrees north.

There have been several changes in the hours at which the forecasts have been prepared for issue, dependent upon the hours of meteorological observation and the convenience of the press. Observations are now taken throughout the United States at 8 A. M. and at 8 P. M. on the fifty-fifth meridian time, which corresponds to 5 A. M. and 5 P. M. Pacific time. The weather forecasts are issued from the San Francisco office about 9:30 A. M. and 6:30 P. M. daily. An earlier hour cannot be selected, because of the want of telegraphic facilities in connection with the reports at San Francisco, from all parts of the Pacific Coast. The language of the forecasts must largely conform to the official instructions issued from the Central Office at Washington, which aim to be brief and avoid ambiguity.

Forecasts of higher or lower temperature are made each morning with reference to the expected minimum temperature of the following morning, and each evening with reference to the maximum temperature expected on the following afternoon. The forecasts of stationary temperature indicate a change of 4 degrees or less, from March to October inclusive, and 6 degrees or less for the remaining months of the year. In the case of higher or lower temperature, a change of 1 degree is sufficient to verify the forecast. A cold wave, in general, is defined to be a fall in temperature, over an extensive area, of 20 degrees in twenty-four hours, or 28 degrees in forty-eight hours, and below the freezing point or below. Warnings of cold waves are issued when it is expected that the area affected will exceed one hundred thousand square miles in extent, and in well defined cases for a lesser area. Forecasts of fair weather mean an entire absence of rainfall, but not necessarily an absence of clouds. Forecasts are usually made for a period of twenty-four hours, but whenever the meteorological conditions are so decided as to dominate the present and are expected to modify coming weather over any extensive part of the country, forecasts may be made for periods of thirty-six, forty-eight, and seventy-two hours.

Generally speaking, it is more difficult to forecast, accurately, the weather of summer than that of winter, because of the absence in the former season of well defined storm centers, most of the precipitation being the result of local changes in temperature and wind direction. For a similar reason it is more difficult to forecast the change from a moderate storm than of those which attend a severe one; because in the latter case the laws of cyclonic development and movement are more closely adhered to, which permits the principles of weather forecasting to be applied with greater success.

LITTLE DROPS OF DEW.

A THEORY OF THEIR ORIGIN, AND OTHER FACTS.

By A. K. BARTLETT.

To the ancient philosophers the appearance of dew and frost were a complete mystery, and numerous were the theories advanced,

scientifically inclined, to account for their production, and the interesting phenomena they presented. Many, it is said, believed that the dew was nothing else than the tears shed by the Almighty upon our earth, and they regarded it as a sacred substance that possessed a number of wonderful and inexplicable properties. They also attributed to it many strange events and curious manifestations that occurred in those times, and some rubbed it over their bodies in order to protect themselves from the evil spirit, whose malignant influence was held responsible for all the marvelous and unaccountable operations of nature observed on the earth and in the heavens above.

Among all the numerous "truths stranger than fiction" that the study of natural science has revealed, there are few more interesting and instructive than those relating to the phenomena of dew and frost.

The late Prof. J. Dorman Steele, in his excellent work, "Fourteen Lectures in Physics," says: "Dew was anciently thought to possess many wonderful properties. Baths in this precious liquid were said to confer greatly to beauty. It was collected for this purpose and for the use of the alchemists in their weird experiments, by spreading fleeces of wool upon the ground. Laurens, a philosopher of the middle ages, claimed that dew was ethereal, so that if we should fill a lark's egg with dew and lay it out in the sun, immediately on the rising of that luminary the egg would fly off into the air! This experiment is best performed with a goose's egg."

There is considerable misapprehension among the general public concerning the nature and origin of dew and frost, it being commonly supposed by the great majority of people that dew actually falls from the sky, and how frequently do we hear the expression "the dew is falling fast." The fact is, dew never falls, but is formed on the surface of the earth, and always at the identical place where it is seen by the observer. Dew is simply the moisture of the air condensed by coming in contact with objects upon the ground that are colder than itself. The earth, heated during the day by the sun's rays, at night cools off and radiates a considerable portion of its heat into space. All bodies, left to themselves, will gradually become cool if previously heated. This is termed in natural philosophy, radiation, and it may be easily demonstrated by experiment. Take an iron ball, for instance, heat it to redness, or until it becomes red hot, and then suspend it by a wire. A little while it will part with all its heat, and feel quite cool to the touch. The heat has been thrown off, as it were, or radiated, and not carried away by the surrounding air, for precisely the same effect will be produced if this experiment be perfected in a vacuum. Our earth is constantly radiating its heat, like the imaginary ball, in all directions, and at night becomes so cool that the invisible vapor resting upon its surface is condensed into water and deposited as "dew." The temperature at which this takes place is called the "dew point," as indicated on an accurate and reliable thermometer. But this point is by no means constant or invariable, since dew is deposited only when the air is saturated with vapor; and the amount of moisture required to saturate the air at high temperature is much greater than for air of low temperature. All bodies have not the same capacity for radiating heat, but some radiate much more rapidly than others. Hence, with the same exposure, some bodies will be covered densely with dew, while others will remain perfectly dry. Dark objects have more dew deposited upon them than

light ones, because they are better radiators, and, therefore, radiate a larger amount of heat. This fact may also be demonstrated by placing a black woolen cloth and a white linen or cotton one upon the ground over night. Grass, the leaves of trees, wood, etc., radiate very freely; but polished metals, smooth stones, and cotton cloth radiate with their heat more slowly, so that the former of these substances will be completely drenched with dew, while the latter, in the same position, will be comparatively dry.

The amount of dew formed in any night is greatly influenced by the condition of the atmosphere. More dew is formed on clear nights than when the sky is obscured by clouds, because they act as a screen and reflect back the heat radiated by the earth into space, thus furnishing that received by them during the day, which prevents the earth from cooling off enough to produce a large deposit of dew. When the sky is free from clouds the earth radiates a larger amount of heat, as there is nothing to intercept that thrown off from its surface. This is the reason why we always have colder nights when the sky is obscure than when it is clear.

The formation of dew is prevented by a strong breeze, which disperses the layers of moisture resting upon the ground before they have a chance to cool down to the "dew point." A slight breeze, however, is favorable to the production of dew, as it replaces the layer of air from which the water has been deposited by another containing more moisture. Dew may ever be expected when the sky is obscured by clouds, and there is a strong wind.

The moisture that appears on the outside of a pitcher when it contains very cold water is nothing but dew, and is produced by the same cause explained above. This dampness frequently observed on a cold pitcher, even during the hottest weather in summer, is commonly referred to by saying "the pitcher is sweating;" and in this simple illustration we are permitted to recognize, before our eyes, on a small scale, the same interesting process of dew formation that takes place on the surface of the great earth.

HOW CLIMATES CHANGE.

RECORDS QUOTED TO SHOW THAT THE EARTH'S HEAT INCREASES.

By W. H. H. MURRAY.

It is a matter of knowledge to many that the summers are longer and measured by the heated term—and the winters warmer than they were a half century ago, and that this result has been reached by natural and surely operating causes, and this slow but sure change in the climate of the country is one of momentous interest, not only to the farmer, but to the average citizen as well, for should it continue, vast changes would follow in the industries and products of the country, and in its hygienic conditions.

It would not be an unprecedented experience if the northern part of the American continent was passing through a climatic change

of a sort as to become memorable in the history of the globe. For while scientific observation and records are of too recent a period to supply us with adequate data for intelligent judgment as to it, nevertheless literature is filled with evidence bearing directly upon the point, and so implicit in its nature and so emphatic in its iteration as to be almost unimpeachable. As most Americans are too busy to know much of the past, it may be interesting should we recall a few of the passages in support of our suggestion or surmise.

IN PALESTINE AND ITALY.

The land of Palestine is certainly not to-day a wintry country. But many centuries ago an ancient poet wrote: "Hast thou entered the land of the snow? Or hast thou seen the treasures of the snow? Out of whose womb came the ice and the hoary frost of heaven; who hath gendered it? The waters are hidden as with a solid rock, and the face of the deep is frozen." Such, evidently, was the degree and effect of the cold in the land of the Midianites thirty centuries ago. David, writing several centuries later, gives the following description of intense winter weather: "He giveth snow like wool. He scattereth the hoar frost like ashes. He casteth forth his ice like morsels. Who can stand before his cold?" Such is the account of the climate in the land of Palestine twenty-eight and thirty centuries ago. But instead of snow, hail, ice with the solidity of rock, and frozen sea, the inhabitants of that country to-day live in a hot, sultry climate, in which snow and ice are never seen.

The climate of Italy, as it was of old time, and the great change which has come to it, are not beyond the student's knowledge. Virgil was a poet and a skilled agriculturist. And in his "Georgics" he often gives directions for the security of young cattle against the dangerous effects of ice and snow and periods of intensely cold weather. His descriptions were for the neighborhood of Mantua and Naples, and when speaking of Calabria, the most southern and hottest part of Italy, he speaks of the freezing of the larger rivers and streams as a thing to be usually expected.

For does he stand alone in his witness as to this matter, for Pliny, Varro, and other authors of their time, speak of ice and snow as prevalent in all parts of Italy, while Ælian, if we remember correctly, devotes a whole chapter to the giving of specific directions of how to protect flocks when the rivers are covered with ice. These descriptions of the Italian climate apply to it as it was eighteen centuries ago.

Ovid can be quoted in this connection also. We are writing from memory and with less fullness than we might, could we turn to the poet's books, but should any classicist be interested to follow us he will find that our recollection is essentially correct. This poet was banished from Italy to Tomis by the Emperor. This place is near the mouth of the Euxine Sea, and climatically includes the region round about Constantinople. He spent seven years in exile in this region, and he tells us that he saw the Euxine, or Black Sea, covered with ice; that this ice was not only strong enough to support men, but oxen and sleds loaded with products. He states, moreover, that the wine of the country was often frozen, and that the snow in many places in the country was never fully melted during the entire summer. It is a

well established fact that in the year 401 the Euxine Sea was over for twenty days together. This is certainly a most extraordinary picture to one who has lived in this century in Constantinople with knowledge of its climate.

CHANGES IN GERMANY'S CLIMATE.

The Alps and Apennines are the highest of European mountains. History has no stranger tale to tell than the march of Hannibal over these lofty ranges. It was one of the wonders of antiquity, and Polybius both bear repeated testimony to the sufferings of his army from the terrible cold they encountered, and the awful obstacles of snow and ice. But these mountains are easily passed to-day, for the same conditions connected with the severity of the climate do not exist.

Nor have the changes in the climate of Germany been less remarkable. A Latin historian records that in Cæsar's time the Rhine and the Elbe were not only frequently frozen, but so deeply frozen that the boats were able to uphold, without cracking, the heaviest of weights. Hence the barbarians—the native Germans—chose the winter season for their campaigns, because they could then transport their armies, cavalry and heavy wagons along those rivers over a solid bridge of ice.

We might easily continue these quotations from the ancient writers in witness that the climate of both Asia and Europe has undergone a vast change in the last two thousand or three thousand years; a change so profound that it has affected both the character and habits of the people and the products of these countries; a change which amounts to one degree for each hundred years; but we have suggested enough to give direction to the popular thought touching a probable change in our own country. May it not be that the same causes which operated to modify the climate of the East are now at work here? That of this western hemisphere, and that within one thousand years the palm and the date tree will be growing in the valleys of the Connecticut and the Merrimac, and the pomegranate blooming on the shores of Lake Champlain, while the Adirondacks and the Catskill Mountains shall be covered with the olive? May it not be that the American of the future shall spend his summers under the orange groves of New Hampshire, and the inhabitants of Quebec shall ship wheat as they pick it in the slopes of the Laurentian hills? Verily, we can foretell the changes that may come if the world will only go on getting hotter and hotter.

RAIN AND SNOW.

[Greeley's "American Weather."]

Rainfall is the most indefinite of the various meteorological phenomena, as to its locality, distribution, seasonal recurrence, and amount. It is impossible to draw a sharp line between mist and rain. When the condensation of aqueous vapor takes place rapidly and the small droplets of mist increase in diameter it is then called rain. The amount

in which rain forms is not known. Different theories have been advanced, some assuming that two masses of saturated air of different temperatures are suddenly combined, with the result of immediately condensing the excess of moisture which necessarily results. Others assume that rainfall usually occurs by the cold of expansion or elevation, resulting from large masses of saturated air being forced upward by under-running currents of cold air, or by violent out-draughts of warm air from the upper strata of the atmosphere, which naturally draw upward the saturated air. Doubtless both methods obtain to a greater or less extent, and it is susceptible of proof that the heaviest rains of the world are caused by the cold of expansion, where the general movements of the atmosphere result in warm, moist air being forced or drawn up to great elevations by the presence of abrupt mountain ranges, over which the air must pass, and in so doing lose the greater part of its vapor. The author believes in the general law advanced by Blanford, that however vapor laden may be any current of air, however saturated, it will not bring rainfall so long as it preserves a horizontal movement. When, by increased elevation, or eddies from increase of friction, or the action around borders of a barometric depression, causes formation of clouds and rain.

Excessive rainfall on land occurs at places in middle or lower latitudes contiguous to a sea of comparatively high mean temperature and in the direction in which the prevailing winds blow. The heavy rain results from the condensation of moisture by cold, caused, as some suggest, partly by the winds passing over a land of lower temperature, or, as is more probable, by being forced upward, more or less sharply, by the configuration of the country.

The author, from a somewhat extensive observation of weather conditions, fails to find any cases where the vapor-laden air is apparently cooled to any extent by radiation or convection from land of low temperature. The process of cooling a body of moist air by its own radiation into space, or by convection or radiation from cold land, must be very slow, and the final effect inconsiderable; especially as compared with the cold of elevation, which is about half a degree for every hundred feet of ascent.

Sufficient rainfall over land occurs in high latitudes, where the mean temperature of sea and air are both low. In low latitudes it results from the prevalent winds having been deprived of the greater part of their moisture by having passed over mountain ranges of considerable elevation, or by their passing over a country having nearly the same temperature as the region from which the moisture was drawn, and where the country does not rise with marked abruptness. Tranquil atmospheric conditions arising from the absence of low areas, or exemption from their influence owing to intervening and obstructing mountain ranges, tend to reduce the amount of rainfall.

Rain or snow from a cloudless sky sometimes occur, and is called drizzle; it is nearly always small. Buchan cites a case from the experience of Sir J. C. Ross (the famous Arctic traveler), on Christmas day, 1829, near Trinidad, when a light shower of nearly an hour prevailed without a cloud in sight. Similar cases have not been infrequent in the United States, where over twenty have been observed. It is often stated that the rainfall may be from thin and translucent clouds.

Prof. T. Russell, in examining nearly one hundred cases of snow from a clear sky, found that the larger number occur southwest side of an area of low barometer, * * * at a distance of about five hundred miles from its center." Frequently high winds prevail, so that the snow could be carried from a cloudy region in the air.

On June 30, 1877, a heavy shower at Vevay, Indiana, lasted minutes, fell from an apparently cloudless sky. The raindrops of large size, and, as caught on a sheet of blotting paper, made circles and a half inches in diameter. Nearly three fourths of an inch fell from a clear sky on March 15, 1885, at Bloomington, Illinois.

In the experience of the author at Fort Conger, Grinnell Land, 44' north, snow or frost fell almost daily during the prolonged spells in mid-winter, when spiculæ of frost appeared to be caught in suspension in mid-air. This snowfall and frost phenomenon is attributed to the solid condensation of the aqueous vapor of the comparatively warm upper air by the layers being successively cooled partly by radiation and partly by contact with the cold understrata. It was invariably the case during prolonged cold in the upper strata of air, as shown by observations on adjacent mountains were always warmer than at the bases.

There are occasional instances in which black, yellow, or green are reported, as well as showers containing fish and animals and insects of various kinds. In all these cases the foreign constituents of the rain or snow are due to impurities gathered from the air of the earth.

In March, 1879, several instances of yellow rain or snow occurred in the United States. At South Bethlehem, Penn., during the March sixteenth there was a slight fall of snow in that section, and the next morning, when the snow had melted, a yellow deposit was covering the ground, more or less. Upon examination the deposit was found to be the pollen of pine trees. The Signal Corps observations at Orleans reported light showers on the seventeenth, and stated that a peculiar feature of the rain was its yellow color, which was due to quantities of the pollen of the cypress trees floating in the atmosphere. At Lynchburg, Va., yellow rain fell on March 21, 1879, a sample of which was transmitted to the Surgeon-General, United States Army, for microscopic examination. Major J. J. Woodward, Surgeon, United States Army, reported that "the yellow powder which gives the physical properties consists entirely of the characteristic triple pollen of the pine. The pine woods in the region around Lynchburg had been in blossom, I believe, for some days previous to the time, and the direction of the wind at the time should indicate the source of the pollen came from. Under favorable circumstances, however, the pollen may be carried for long distances, so that its source is not near the town."

Professor Weber gives an account of golden snow on February 1877, in Peckeloh, Germany. He says: "The snow did not fall white but yellow, and a kind of yellow which gave the appearance of a surface strewn with gold dust. I took up some of the snow, put it in a porcelain dish, and allowed the snow water to evaporate. A yellow film settled upon the sides of the dish, very evenly distributed."

Green and red snow are to be found in a few parts of the

principally in the Arctic regions, the color being due to minute organisms called *Protococcus nivalis*. The most extensive deposits of red snow were discovered near Cape York, Greenland, were discovered by Captain John Ross, R. N., in 1818, from which the hills, owing to this snow, derived the fanciful name of Crimson Cliffs. The color, however, as given by the author, is a faint, dirty, dull red, and not crimson.

RAINFALL EXPERIMENTS.

In the last annual report of the Department of Agriculture, Secretary Bask remarks as follows concerning the proposed experiments in the production of rainfall, provided for by Act of Congress:

An amendment to the Act of appropriation for this department was passed at the last session of Congress, placing at my disposal the sum of \$2,000 for experiments in the production of rainfall, it being understood that such experiments were for the purpose of ascertaining whether such a result could be attained by the use of explosives. The difficult and problematical nature of these experiments, and the necessity of undertaking them only under the direction of a person possessing thorough qualification for conducting the work, has made it thus impracticable for me to give the matter proper attention. The experiment, it is expected, soon be inaugurated."

The time should be fitly chosen, and the work should be conducted under the direction of meteorological experts, who are able to determine the value of the results obtained. Nothing less than this will satisfy the demands of people, especially old veterans, who are very positive in their belief that vigorous cannonading will pound rain out from a cloudless sky. The question ought to be settled for educational reasons, though no practical benefit may result from the experiments. The Government is able to bear the trifling expense.

Some striking historic cases are cited to sustain the popular belief that heavy cannonading may produce copious rainfall under certain atmospheric conditions. At the siege of Valenciennes by the allied forces in June, 1793, the weather, which had been remarkably hot and dry, became violently rainy after the cannonading commenced. Two hundred pieces of artillery were employed in the assault, and one hundred in the defense of the city, all of which were frequently in action at the same time.

At the battle of Dresden, August 17, 1813, the weather, which for several days had been calm and intensely hot, suddenly changed, and a heavy rain fell.

At Waterloo, according to Siborne, the weather during the morning of June 17, 1815, had been oppressively hot. It was now a dead calm; not a breeze was stirring, and the atmosphere was close to an intolerable degree, with a dark, heavy, dense cloud impending over the combatants. The Eighteenth Hussars were fully prepared and awaited the command to charge, when brigade guns on the right commenced firing for the purpose of breaking the order of the enemy's advance. The concussion was instantly to rebound through the still atmosphere and communi-

cate, like an electric spark, with the heavily charged mass a violent thunder clap burst forth, which was immediately followed by a rain which has never, probably, been exceeded, even in the tropics, a few moments the ground became perfectly saturated.

It will be noted that in the instances above cited the conditions were favorable to heavy precipitation, and there is nothing therein to establish the correctness of the hypothesis that the concussion of air caused the downpour. Humboldt said that in South America a sudden eruption of a volcano, occurring in a dry season, sometimes changed it into a rainy one. But this may be attributed to the great heating volcanic discharges, which caused a sufficient disturbance of the atmosphere to produce rainfall. There is, in fact, a greater probability that rainfall may be produced by an extensive combustion than by making a great noise with big guns or dynamite bombs. Let us have the experiments with the dynamite to settle the question.

Captain James Allen, of the Signal Office, replying to an inquiry recently addressed to him regarding the probability of producing rain by artificial means, said: "One fact would seem to be easily established, that an attempt to explode gunpowder in order to practically demonstrate the advisability of attempts in rain production, should be made after most careful consideration of the atmospheric conditions. For example, if the explosions should be made in the center of a low area, as shown by our weather maps, or even after a low area has passed any point, we may be absolutely certain no rain will follow. The experiments should be undertaken to the southeast or east of a low area, and three hundred to six hundred miles from the center. Observing stations should be established every five or ten miles for two hundred miles to the eastward of the point of explosion. If the explosion is made in a comparatively clear sky, and after that unmistakable evidence is observed to the eastward and not to the westward, some conclusion may be surmised. It must be said, however, that even if the production of rain be practicable, it can only be for a very limited area, and is believed that any benefit which can possibly arise from such experiments will never amount to the expense of the enterprise."

THE POWERS OF THE AIR.

By FELIX L. OSWALD.

In the course of the last fifty years the progress of science has so thoroughly illustrated the significance of the old saying that truth is stranger than fiction. The good steed Bayard would be eclipsed by an iron horse as the darts of Orion are distanced by a minnie ball. A dolphin-riding guest of King Periander would be glad to exchange his seat for the steerage berth of a Cunard steamer.

Still greater, perhaps, would be the surprise of the mystic if he could see how far the discoveries of the nineteenth century have passed anything dreamed of in the philosophy of his speculation. The acts of the "Invisible Powers." Invisible disease germs are believed to decide the question of life and death for countless thousands of

men. Invisible currents of a mysterious force carry our messages with a speed immeasurably superior to that of the best broom-besetridewitch, and the "empty air" has been found to possess potencies exceeding those of all the twenty-seven varieties of aerial demons enumerated by the author of the "Enchanted World."

After a few years' cruising in the eastern Mediterranean, Sir Charles Wilkes became inclined to "doubt if the mariners of Greece and Rome had experienced such a thing as a genuine tornado;" but only since the establishment of meteorological observatories have even the navigators of the West begun to realize the force exerted by a common ocean

storm. The storms of the northern Atlantic have been known to reverse the current of the tides and to upheave the waters of vast ocean areas with a force equal to a pressure of sixty billion pounds to the square mile. Storms originating on the plains of our central States have more than once reached the east shores of our continent, crossed the Atlantic, and swept over a considerable portion of Europe and western Africa, overcoming the resistance of all counter currents and displacing a bulk of atmospheric strata that could not have been more than momentarily moved by the explosion of a mountain of gunpowder.

Air currents, with their incalculable influence on the climatic conditions of our planet, have, indeed, been recognized as the most potent of all elementary agencies, and it is curious that the manifold inquiries into the proximate causes of their disturbances have as yet not led to any definite results. Dove and Redfield, the discoverers of several important atmospheric laws, suppose storms to be analogous to the eddies formed near the points of contact of two different river currents, and assume the existence of established storm-routes, corresponding to the deflections of permanent equatorial and polar waves. Storms, however, are by no means confined to the region of the permanent air currents (trade winds, etc.); and are notoriously apt to follow a protracted course. Recognizing the local and, as it were, abrupt origin of many storms, Professor Espy tried to explain them on the following hypothesis: "Whenever the vapor of the atmosphere," he says, "is condensed into clouds or rain, the heat thus generated will rarefy the surrounding strata, thus causing them to rise upward, and leave a vacuum which is speedily filled by rushing air currents from all sides. Hence, the gusts of a cyclone blow from every quarter towards the center of the storm." That theory, however, has not yet been reconciled with the circumstance that more heat is set free when vapor is condensed into snow than into rain, while snow-tornadoes are much less frequent than warm rain cyclones.

Dr. Schaller's hypothesis connects the recurrence of storm periods with certain conjunctions of the planets, but tested by experience it involves as many misses as hits, and reminds the humorist Vogt of the observation made by an old lady who stated that the memory of many sleepless nights had taught her to expect a rain whenever she heard tom-cats mew on her roof. She owned an old rookery in the rain-clouded hills of Salisbury, and inquiries elicited the fact that her assortment of household pets included about twenty-five cats of both sexes, so that the logical and meteorological phenomena could not help coinciding once in a while.

It unquestionably plays an important part in the development of

air currents, as attested by the fact that the frequency and violence of storms increase as we approach the equator, and that in the high latitudes thunder storms generally follow a period of more than a month of warm weather. Violent gales, however, are experienced in the tropics as often as in any other two months of the year, and in the tropics the genesis of cyclones presents problems too complex for the formulation of anything like a positive rule of prediction.

But, though the cause of storms has never yet been explained, the way to reconcile all their regular and exceptional phenomena, and the origin of those phenomena themselves has been carried to a remarkable degree of completeness. The direction and velocity of many thousands of gales have been ascertained with the aid of all sorts of self-registering instruments; the frequency of gales in respect to special seasons, moon, and lunar phases, has been recorded for years, and a large number of gale tracks have been mapped out as a surveyor would map out the course of a well defined river. These "tracks," by the way, exhibit regularities that make it probable that the ancients must have entertained rather inadequate notions concerning the geographical extent of gales.

Tornadoes are strangely apt to follow a zigzag course, varying as well as horizontally; *i. e.*, they will not only turn off suddenly at angles to their former line of progress, but will seem to leave the line of that line altogether and dart upwards into unknown heights, and then plunge down again, and resume their work of destruction. Scores of miles from a point where they appeared to have expended their force in whirlwind and torrents of rain. Gales that seem to terminate abruptly on the table lands of central Spain may thus reappear on the coast of France, follow the coast plain north to the mouth of the Seine, turn eastward, appear to spend their fury in the gorge of the Ardennes, and like a whirlwind of local origin break out again in the plains of Holland or northern Germany.

The mode rather than the cause of these erratic deflections is expressed in the rule that storms are apt to blow from regions of high to regions of low barometric pressure, and that they are preceded by a rise and followed by a depression of temperatures. "Gales follow the lines of least resistance;" that tendency has been summarized in conditions seeming to determine the direction of special air currents, and apt to change too suddenly to predict the event with any degree of certainty. Experience has, however, partly compensated the lack of theories, and, given the direction, the temperature, and the velocity of an incipient storm, the phenomena of its development can often be inferred from the analogy of recorded precedents. Thus, it has been noticed that cyclones, with all their tendency to move in spiral paths, will not return across a given degree of latitude and longitude. "Storm centers" have once advanced to a certain distance in a given direction, and that north of the equator storms turn from right to left, but in the southern hemisphere from left to right, like the hands of a watch.

Theories have been elaborated to fit those facts, but we should not get Ehrenberg's "Hint to Cosmologists," and the occasional inductive modes of explanation. "Suppose," he says, "meteorologists should prove to be much warmer than the valleys below, the theorists be long in formulating a science-approved explanation."

"Warm air," they would say, "has a tendency to rise, as we see by the upward draught of an open fireplace and the ascending smoke-clouds in a conflagration. Those uprising currents of warm air naturally raise the temperature of lofty mountains, which, besides, are so much nearer the sun, and catch the first and last rays of its warming light." And it might seem logical enough to suppose that highlands must be specially liable to the ravages of violent gales; but it so happens that destructive storms are about ten times more frequent on coast plains and extensive table lands than anywhere in the mountains. Nor is that community confined to sheltered mountain valleys. Hilltops overlooking hundreds of miles an adjoining plain have a ten-to-one chance to get hit with a mere ripple of the hurricane that bursts like the crack of a whip on the prairies below, and in the southern Alleghanies there are tracts of several thousand square miles which, since the memory of our first settlers, have never experienced anything worse than an ugly under storm with its concomitants of hail and electric fire, while under the same parallels of latitude the prairies of Kansas can hardly boast a storm that has not undergone repeated opportunities to appreciate the utility of a "cyclone pit."

The fact seems to be that storms rarely rise above a certain level, and gales crossing our continent from west to east often appear to wreak their rage chiefly on plains bordered on the east by mountains that serve as a barrier to the further progress of the storm, which nevertheless manages to rally its forces somewhere east of the obstructive highlands. Northern Georgia forms a west-wind trap of that sort, and in 1874 the country from Edgefield to Gainesville was swept by a gale which at one point hurled a freight train from its track and discharged the load of a level car in a way suggesting a volley of case-shot fired from a battery of howitzers. In 1885 the same region was ravaged by a cyclone that left its mementoes in a heavily timbered district west of the Tallapoosa River. About six miles east of Clarksville the storm has torn out a path in a manner strikingly illustrating the rotary movement of a tornado. Thousands of trees—tall pines, most of them, which, in the judgment of expert woodcutters, would have yielded to a one-sided blow by snapping off in the middle—have been plucked out, twisted out, or were, by the roots, and are scattered about in a promiscuous way. If the storm had struck them from all sorts of different directions. The helmsmen of storm-ships are often sorely bewildered by those sudden changes of the gale, and pedestrians caught in a tornado are liable to be hurled down by a push from what a moment ago appeared to be the lee side of the road.

The tornado that overthrew the walls of the old Roman amphitheater at Arles, in the winter of 1827, could have lifted the "Great Eastern" from its moorings; and experts estimate that the force exerted by combined waves and breakers in the repeated destruction of the Eddystone light-house could have been equaled only by a protracted bombardment from a battery of heavy siege-guns. During the gale that visited the north-west coast of Ireland in February, 1857, the west coast of Ireland was strewn with the wreck of more than one vessel that had been blown upon reefs and high cliffs; though a still more violent storm was experienced north of the Mersey, near Liverpool, England, on the third of December, 1863, when intermittent gusts of the hurricane were, by actual measurement, found to have attained a speed of *ninety-two* miles an hour.

Yet no local storms can give the inhabitants of the frigid more than a faint conception of the cyclones which occasionally sweep over the lowlands of the tropics—especially the coasts of the Caribbean of the Indian Ocean, and of the southwestern Pacific. The storms which dash against the cliffs of the Philippine Islands can often be seen pouring back in torrents resembling the waterfalls of large rivers. Varenus, in his "Geographia Naturalis," describes the typhoons of the Chinese seas as "storms which rage with such intensity and fury that those who have never seen them can form no idea of them, and would often tempt one to say that heaven and earth wished to ruin their original chaos."

The navigators of the Japan seas, too, must often feel inclined to consider the name of the "Pacific" a preposterous misnomer. The "calms" specified on mariners' charts represent merely the intervals of the trade-wind tracks, and are by no means specially exempt from the visitation of destructive storms. Of all seas thus far discovered, the advantage can be claimed most fairly for certain sheltered bays of the eastern Mediterranean; of all *terra firma* regions, for the upper reaches of the Sacramento River, in Northern California.

METEOROLOGICAL CONDITIONS OF ARID REGIONS

[Monthly Weather Review.]

At the recent annual meeting of the Scottish Meteorological Society, Dr. John Murray read an interesting paper on the meteorological conditions of desert regions, with special reference to the Sahara, the eastern border of which he had recently visited.

He pointed out that the arid regions of the world are distributed in two bands, north and south of the equator. They are all inland areas, or areas where the streams have no connection with the sea. They are also regions where evaporation is in excess of precipitation. If the latter were in excess the water would rise until it overflowed into the sea, as in the case of the great lake district of North America, and the area would no longer be one of inland drainage. The area of the deserts, the Sahara, is about three and a half million square miles in area, and the area of all the deserts of the world together is about eleven million five hundred thousand square miles. That is to say, over one fifth of the land of the world has no outlet for its waters to the sea, and in all that area evaporation is greater than precipitation. These areas correspond very closely with the regions of the world where the rainfall is less than ten inches annually. In no place in the world can there be found such enormous changes of temperature as in the deserts. In the Sahara, the temperature sometimes falls from 100 degrees during the day to the freezing point during the night. This arises from the great dryness of the atmosphere, and from the fact that the heat that takes place from the burning soil after the sun has set is lost in the inland drainage areas correspond very much in their barometrical phenomena. In all desert regions during the summer all winds blow from the south.

In winter the reverse takes place, the winds flow out of them, and this leads to the low rainfall, for the great majority of these regions are more or less bounded by high hills. The winds come into the valleys over these hills, and the vapor is precipitated from the atmosphere by the hills, with the result that when the winds reach the interior regions there is nothing left to be deposited. If there are not hills around any desert area, then, as in the case of northern Asia, the winds pass from a colder to a warmer climate, and as they get to warmer regions they are able to contain more vapor, and none is precipitated.

Dr. Murray examined the Sahara region geologically, and found that the formation of rocks was entirely that of fresh water, and of Quaternary date. The great majority of geographers and geologists have expressed the belief that the whole of the Sahara is an old seabed, but in his opinion it has never as a whole been covered by the sea since the Cretaceous or Devonian times, and no part of it has been covered by the sea since Tertiary times. The whole question about the discovery of shells seems to rest upon one common species being found very rarely in one region of the desert. Owing to recent researches, the opinion as to the Sahara being an old sea bottom is very likely to disappear from our text-books. He considers that the features of the region have been produced by atmospheric conditions. The sand is the product of the disintegration of the rocks *in situ*. The existing rock is not far below the surface, and by digging down to it the hard sandy particles are found imbedded in the stone. The sun shone on the rocks and they expanded. The sudden cooling at night broke them up, the wind carried away the smaller particles, and so continually the rocks are being disintegrated by means of changes other than water, although water in times past played a greater role there than it does now. There is a range of mountains in the desert seven thousand feet high, and for three months in the year their summits are covered with snow. Descending the hills are the river courses, some of great length. Much of the region he considers has once been a large fresh water lake. Speaking of the commercial aspect of the Sahara, he said it was difficult to go there without coming enthusiastic about it. There seems to be no limit to the amount of water that can be obtained by sinking artesian wells.

ANOTHER WORLD.

By CAMILLE FLAMMARION.

The astronomers have again made an unexpected, a marvelous, and a most original discovery. They have just found out a world which has neither hours, days, weeks, months, years, nor centuries—a world without an almanac. This world is not far off, astronomically speaking. A telegram or a telephone message would reach it in five minutes. It belongs to the same celestial circuit as ourselves. It is one of the globes of our solar system. It is Mercury.

Yes, Mercury, that beautiful star bathed in the lucent fire of solar rays, who was identified with Hermes by the graceful and mythology of the Greeks, and personified by having wings at his feet, making him the nimble-footed messenger of Olympus, the faithful companion of Apollo, and at a late day the god of doctors, carries, thieves, traffic, and gain; Mercury, whom we but seldom sight of in our latitudes, because he always strays too near the sun, swims into our vision only as a morning or an evening star less and more fugitive than Venus; a planet, in fact, that astronomers have been watching for thousands of years, and that our first parents in the Garden of Eden were, no doubt, able to contemplate in the half-light which precedes the hour of rest and that of awakening. Yes, Mercury has recently been the object of new and scrupulous investigation, from what has been made out it would seem that he merely circles the sun in such a way that he constantly presents to that luminary the same unvarying hemisphere. This is certainly something not altogether unexpected.

Astronomers have hitherto thought that Mercury rotated on earth in twenty-four hours, and for the following reasons:

The geographical outlines on the surface of Mercury are very difficult to observe. They are weak, pale, and illy defined. As, moreover, the planet turns round the sun in an orbit included within that of the earth, a moment of reflection will show that Mercury is nearly always between the sun and the earth. But at that time he turns his dark side toward us, so that the conditions are obviously adverse to telescopic research. At better hours when, half an hour after sunset or before sunrise, he is in quadrature and seen with the naked eye, he appears through the instrument in the shape of a small half-moon. This phase, as he approaches our eye, gradually changed to that of a very slender crescent. To see Mercury with rounded form and fully illuminated orb we must choose the time when he passes beyond the sun. He is then at a great distance from us, very small in size, and eclipsed by the dazzling blaze of the sun's light.

It will thus be seen that the chances for a proper physical investigation of this planet are extremely meager. Nevertheless, towards the close of the last century, several astronomers, and among them especially Schroeter, devoted their attention to the task. Their investigations showed that Mercury underwent little change in appearance from one night to another, and that the spots seen on its surface, for instance, would be seen again to-morrow at the same hour of observation. And the inference was drawn that this globe rotates on earth in about twenty-four hours.

Of this, however, we are not quite sure, because the spots on Mercury's surface were never seen to move from one edge across to the other as in the case with Mars or Jupiter. In observing the latter, the spots are sufficient to establish beyond doubt that they rotate on their axes. But Mercury does not remain long enough above the horizon to let the eye follow his career for several hours.

Matters had thus stood for about a hundred years, when one of the most laborious and skillful of living astronomers, M. Schiaparelli, Director of the observatory at Milan, to whom science is largely indebted for the discovery of the enigmatic canals on the planet

Mercury, the still more enigmatic duplication of those canals, resolved to employ that excellent instrument which had wrought such wonders in the case of the planet Mars to the minute study of Mercury, and he at once went to work.

Mercury sets almost immediately after sunset, or rises but shortly before sunrise, the great Italian astronomer soon found that he had nothing to expect from a single hour of observation each day, and that some other mode must be adopted to overcome the difficulty. This was more evident, as in order to be able to explore the full disk he had, in force, to select those epochs when the planet approaches the time of its greatest elongations. The only means left was to observe Mercury, not in the morning or the evening, but by day, in the full blaze of the sun, and when the planet was in close propinquity to the dazzling orb. That is what the Milan astronomer has done, and success has crowned his endeavors.

For seven years (he commenced his observations of Mercury in 1882) he has turned to profitable account those best days, when sun and atmosphere were most calm and pure, directing his equatorial toward the planet when nearest to the solar orb, and making drawings of what an eagle eye could discover on its surface.

He has thus been able to obtain several hundred sketches.

On all of these drawings, each of which confirms the other, may be seen long gray streaks, that possibly represent seas or forests. The streaks do not move over the planet's disk as clouds might do, but remain immovable, fixed as the soil of Mercury itself. Several of the streaks assume rather singular shapes. For instance, there is in the north an arrangement which figures to all appearance a huge 5.

These streaks do not move away; at whatever hour of the day or period of the year they are sought they are to be found. Whether the planet is to the right or left beyond the sun, and whether affording to our eye the full disk, a half-moon, or a crescent, these streaks are always to be seen at the same spot on Mercury's globe.

And again, no other streaks are ever to be seen unless they happen to be some white passing clouds.

They are permanent. Mercury revolves round the sun in eighty-eight days, constantly presenting to that luminary the same hemisphere. It is thus linked with the geological outlines in question. Thus Mercury circles the sun just as the moon does round the earth, with the same result: always turned toward the central orb of our system.

But with this result: that the conditions of life and the measurement of time are very different as regards Mercury from those connected with our satellite. While the regular movement of rotation of the latter gives us to the moon days and nights fifteen times longer than our own, the circling motion of Mercury affords perpetual daylight to that side of the sphere which is turned toward the sun and perpetual darkness to the other side.

Such a state of things must certainly entail the strangest conditions of existence.

It is much the same as if the sun, for instance, never sank below the horizon for us, and never rose above it for our antipodes. The sun everlingly hovers at the zenith of the central point in the diurnal hemisphere; it does not, however, remain absolutely motionless. As Mercury revolves round the orb of day while describing, not the circumference of

a circle, but an elongated ellipse, an irregularity in its motion results by which the sun seems to slowly poise—or appear stationary—in the heavens of the Mercurians on either side the zenith of the meridian to which I have just alluded. Thus he glides on the well as on the west as far out as $23^{\circ} 41'$ on either side—his excursion taking up fifty-one days and his occidental one thirty or eighty-eight days in all, which is the time of Mercury's orbit round the sun.

This alternate movement has for effect to give sunlight to the side of Mercury's sphere to an extent, however, not exceeding $23^{\circ} 41'$ from the mean line separating the two hemispheres. In the central regions of the side opposite that facing the sun is demned to perpetual darkness.

It is endless day on one side and endless night on the other. I have described the former in his ineffable circles of Paradise and the latter in the asphaltic lake of outer darkness in the Inferno.

On the one side is light, and always light; on the other, never a gleam of light, but gloom. The diurnal hemisphere has the sun constantly on the face. Fancy yourself in Columbia, Guiana, the Congo, to the south of the equator, in Zanzibar, Sumatra, at Borneo, New Guinea, or in the Indian Ocean, the Malaysian Sea, with the sun at its zenith, vertically darding its rays upon your head. And what a sun! Mercury is, on an average, only thirty-six millions of miles from the sun, while we are about thirty-five millions of miles. The great orb of day appears seven times as viewed from his surface than as seen by us, and sends, on an average, seven times more light and heat. I say on an average because, as we have seen, the planet follows in his course an elongated ellipse. At every forty-four days it attains a maximum and a minimum of distance from the sun. In the first case the solar disk appears only four and a half times larger than with us; but in the other position it grows to be ten and a half times larger in size. What a focus of light and heat! We cannot but complain of the heat of our distant sun; but what is our luminary compared with the dazzling brazier of Mercury? It is as if the sun converged over our heads at the summer solstice, whose united rays poured down at noon their concentrated heat upon us; and this is not a season only, but ever and ever. Mercury's seas must be constantly boiling water.

A perpetual day! There is neither evening nor morning. There is no night.

There are no stars, and consequently there is no astronomical observation of the apparent movement of the heavens. There are no hours.

Mercury has no satellite. It follows there are no months, no years, no measure of time that way.

Neither are there any years. When would they begin or end? Time on our earth the year is made up of a certain number of days and nights. But how conceive a year where the day is without end?

Doubtless the sun periodically seems to increase and diminish in size, and the temperature also varies considerably. These would constitute seasons of a new order. Have Mercury's inhabitants any idea that they circle round the sun; and that the variation in the size of that orb accounts for the difference in the size of the seasons? These strange seasons seem to be the only measure of time Nature has given them.

No night! And doubtless no sleep. Do they live better and longer? Do they grow old? They seem to be without days, years, or any age. Perhaps it is the land where people never die.

The atmosphere they breathe would seem to be more extended than our own, and to be at times here and there overcast with condensations that look like clouds.

From such an arrangement the seasons would be distributed regularly, a maximum of heat prevailing in those central regions of the hemisphere facing the sun, and a maximum of cold existing in the central regions of the dark hemisphere. On the latter side extends the starry sky, so suitable to astronomical studies, the observation of our earth that twinkles in their sky like a bright star, and besides which may be seen, with the unassisted eye, to revolve the moon. It is not at all unlikely that the inhabitants have been led to organize trips to go from one hemisphere to the other when some in turn visit the regions bathed in a sunshine they had never beheld, and others an unknown night and the marvels of a starry sky.

Seneca wrote two thousand years ago that if humanity had not been accustomed from the womb to those daily wonders it would know better how to appreciate them; and that if there was a country in the world where the starry sky would be revealed in its magnificence, reflective people would have undertaken voyages for the purpose of describing its infinite splendors. The world which the astronomers have just revealed is possibly the world Seneca had in his mind when he wrote. Let us hope that it contains no Neros, and that the Senecas in it do not meet death by having their four veins opened in a bath.

THE CURIOUS HISTORY OF A LADYBIRD—HOW IT SAVED THE ORANGE INTERESTS OF CALIFORNIA.

[Scientific American Supplement, April 4, 1891.]

Various accounts have been published during the past year of the extraordinary success of the importation of Australian natural enemies of the fluted scale, otherwise known as the "white scale" and as the "cushion scale" (*Icerya purchasi*), into California, and particularly concerning the ladybird (*Vedalia cardinalis*), which has done such excellent and satisfactory work in destroying the injurious scale. No detailed account has, however, been published. The results are of the paramount interest as indicating the value of the study of all things connected with the life history of the injurious pests, that we compile a brief history of the interesting experiment.

Persons who have visited California of late years are familiar with the enormous amount of damage done by the scale insect in question, which, indeed, up to the year 1889, threatened the entire subversion of the orange and lemon interests in California. The insect was considered a pest in the annual report of Prof. C. V. Riley, an entomologist to the Department of Agriculture, for 1886. Long accounts of experiments and various washes by agents of the department were given, and

importation of parasites was considered. Professor Riley made the following expression:

Considering the fearful losses already occasioned to California orange growers by the Icerya in question and the California red scale) introduced from we know of no way in which the department could more advantageously spend a thousand dollars than by sending an expert to Australia to study the parasites of the Icerya there and secure the safe transport of the same to the Pacific Coast.

In the spring of 1887 he urged a similar course in an address to the State Board of Horticulture, at its meeting at Riverside, having made careful personal study and correspondence, ascertained that the Icerya was, without doubt, an importation from Australia, and that the natural enemies there which kept it in check. In the winter of 1887 an appeal was made to Congress, by those interested, for an appropriation to send one or two men to Australia to collect and introduce the natural enemies of the scale. Congress, however, not only failed to make a specific appropriation, but failed, likewise, to remove the clause in the appropriation to the Department of Agriculture limiting traveling expenses to the United States.

Imbued with a sense of the importance of the attempt, and vexed by the non-action of Congress, Professor Riley conceived the idea of taking advantage of the Melbourne Exposition. By an arrangement made with the Department of State the Commissioner of Agriculture was finally able to send to Australia two agents of the Entomological Division under instructions from Professor Riley, their expenses to exceed \$2,000, to be paid out of the Melbourne appropriation.

This coöperation of the two departments was entered into with the belief that it would be mutually beneficial, it being arranged that one of the agents should work under instructions with the Commissioner of Agriculture, and assist in reporting on the agricultural aspects of the exposition, while the other was commissioned under instructions to the Entomologist, and to devote himself solely to the study and importation of the natural enemies of the fluted scale, and report to Professor Riley. It was the latter's original intention to proceed to Australia on his own, but finding that his divisional duties and those which he had undertaken in connection with the Paris Exposition precluded his so doing, Albert Koebele was commissioned at his request to proceed to Australia and carry out the entomological work there. The history of Koebele's efforts has been from time to time detailed in "Insects of California," a periodical bulletin of the Entomological Division, and particularly in Bulletin No. 21, which contains the official report of Mr. Koebele on his trip. A large number of living enemies of the fluted scale, both predators and predaceous species, were imported into California and sent over to another agent of the division, Mr. D. W. Coquillett, at Pasadena, Cal. One of them, however, the *Vedalia*, proved so effective in throwing the others entirely in the shade and render their importation unnecessary. A recent department publication remarks:

The little ladybird, which has thus proved itself such a useful aid to California orange growers, has so far received no popular name, but it is already extensively spoken of in California as the "*Vedalia*," a name which will come to be as common in our language as many other names that were originally purely technical, like *geranium*, etc. It is a small, reddish species, and has four black spots on its back, which confines itself almost exclusively to the fluted scale. It has, so far, not been seen to prey upon any other insect, a fact which accounts somewhat for its exceptional work, and renders the outlook extremely encouraging.

It breeds with surprising rapidity, and occupies less than thirty days from the laying of the eggs until the adults again appear. At this rate of increase, calculating that three hundred eggs are laid by each female, and that half of these produce females, it will easily be seen that in six months the offspring of a single female beetle may, under favorable circumstances, amount to over seventy-five billions.

A report published a year ago from Prof. W. A. Henry, Director of the Wisconsin Experiment Station, who was commissioned by the Department to report on the work of its agents on the Pacific Coast, contains the following expression:

Word in relation to the grand work of the department in the introduction of this predaceous insect. Without doubt it is the best stroke ever made by the Agricultural Department at Washington. Doubtless other efforts have been productive of greater benefits, but they were of such character that the people could not clearly see and appreciate the benefits, so that the department did not receive the credit it deserved. Here is the most illustration possible of the value of the department to give people aid in time of distress. And the distress was very great indeed; of all scale pests, the white scale was the most difficult to cope with, and had no remedy been found it would probably have ruined the citrus industry of the State, for its spreading to every grove would probably have been a matter of time. It was the Department of Agriculture at Washington which introduced the Washington Navel orange into South California, and the department has given an effective remedy for the worst scale insect. The people will not soon forget the beneficial acts.

Wm. F. Channing, of Pasadena, Cal., son of the eminent Unitarian minister, in a recent letter to a friend, who has permitted us to publish it, expresses the following experience:

We owe to the Agricultural Department the rescue of our orange culture by the importation of the Australian ladybug, *Vedalia cardinalis*. The white scale were incrusting our orange trees with a hideous leprosy. They spread with wonderful rapidity, and would have made citrus growth on the whole North American continent impossible within a few years. It took the *Vedalia*, where introduced, only a few weeks absolutely to clean out the white scale. The deliverance was like a miracle than anything I have ever seen. In the spring of 1889 I had abandoned my young Washington Navel orange trees as irrecoverable. Those same trees bore two to three boxes of oranges apiece at the end of the season (or winter and spring crop). The consequence of the deliverance is that many hundreds of thousands of orange trees (Navels almost exclusively) have been set out in Southern California this spring.

In the Agricultural Report for 1889, which has just been published, Professor Riley thus speaks of the ultimate issue between the ladybird and its prey:

We may hardly hope, however, that the last chapter in the story is written. On the contrary, it is more than probable, and in fact we strongly anticipate, that the *Icerya* will fully recuperate; that the *Vedalia* will, after its first victorious spread, gradually dwindle for lack of food, and that the remnants of the fluted scale will, in the interim, multiply and spread again. This contest between the plant feeder and its deadliest enemy goes on with alternate fluctuations in the supremacy of either, varying from year to year according to locality or conditions; but there is no reason to doubt that the *Vedalia* will continue substantially victorious, and that the power for serious harm, such as the *Icerya* has done in the past, has been forever destroyed. We have learned, also, that it is always easy to secure new colonizations of the *Vedalia* where such may prove necessary, or even new importations should these become desirable.

In other words, the victory over this scale is complete and will practically remain so, and we agree with our entomologist when he says in the same report that "the history of the introduction of this pest; its spread for upward of twenty years, and the discouragement which it caused; the numerous experiments which were made to overcome the pest; and its final reduction to unimportant numbers by means of an apparently insignificant little beetle, imported for the purpose from Australia, will always remain one of the most interesting stories in the annals of practical entomology."

MONSOONS OF NORTH AMERICA.

By LIEUT. J. P. FINLEY, U. S. Signal Service.

On the continent of North America we have monsoon influences similar to those of Asia, but not nearly so strong, because the range of temperature is not so great. They are, for the most part, not sufficiently strong to completely overcome and reverse the current of the general circulation of the atmosphere, and so to produce a real monsoon, but the great differences between the prevailing directions of the winter and summer winds. In the summer the whole interior of the continent becomes heated up to a temperature much above that of the corresponding latitudes on each side; indeed, above that of the Gulf of Mexico and the Pacific Ocean on its southern and southwestern sides. The consequence is that the air over the interior of the continent becomes more rare than over the oceans, rises up and flows in all directions above, while the barometric pressure is diminished, and air from all sides, from the Atlantic on the east to the Pacific on the west, the Gulf of Mexico on the south, and the Polar Sea on the north, flows in below to supply its place.

On the east the tendency to flow in is not strong enough to counteract the general easterly motion of the air at the earth's surface in the middle latitudes, and to cause a westerly current, but it simply reinforces the general easterly current, and gives rise to a greater prevalence of easterly winds along the Atlantic seacoast during the summer season.

On the southern and southeastern coasts the heating up of the land causes the prevailing winds to be southerly and southeasterly instead of northeasterly, as they otherwise would be in these trade-wind latitudes. The monsoon influence in the Mississippi Valley and westward is strengthened by the gradual slope from this valley up to the high plateaus east of the Rocky Mountain range, so that when this slope is heated in summer the surface air tends to flow up it toward the mountain range, and causes winds which otherwise would be southerly to become more southeasterly, and the southwesterly winds to become southerly ones.

In winter the thermal conditions over the continent are reversed. The interior of the continent is now the coldest part, and it is colder than the surrounding oceans at that season. It has high plateaus and mountain ranges.

The air, therefore, of the lower strata, and especially those near the earth's surface, now tends to flow out in all directions to the oceans and the Gulf of Mexico, and especially to run down the slope of plateau from the Rocky Mountains into the Mississippi Valley. The effect over the whole of the United States east of the Rocky Mountains is to cause the winds, which otherwise would be westerly and southwesterly, to become generally northwesterly winds instead of southerly and westerly ones, as in summer. There is not a complete monsoon, but simply a great change between summer and winter in the prevailing directions of the winds. In Texas, however, and farther east on the northern border of the gulf, the effect is somewhat that of a

monsoon. In New England, and farther south in the Eastern States, the monsoon effect is to cause the prevailing winds to be from some point north of west, instead of south of west, as in summer. Along the west coast of North America, in the middle latitudes, there is a strong monsoon influence, for the interior of the continent becomes heated in summer to a much higher temperature than that of the southwesterly ocean, and hence a strong current is drawn in from this direction at right angles to the general trend of the coast, which, combining with the general southwesterly winds of these latitudes in the general circulation of the atmosphere, causes the strong and steady westerly and southwesterly winds of this region during the summer.

Farther north, toward Alaska, the summer monsoon effect is combined with the current caused by the deflection of the continent as well as the general easterly current of high latitudes, so that the winds here are generally southerly, but still have somewhat of a monsoon character. Along the northern coast of America, as along that of Siberia, the monsoon tendency is to draw the air from the colder land to the warmer ocean in winter, and the reverse in summer. These effects, combined with the general easterly motion of the atmosphere in these latitudes, give rise to prevailing southwesterly winds in winter and northwesterly winds in summer. The winter monsoon influence is small—much more so than in Siberia, for the ocean contains so many large islands that it has rather a continental than an oceanic winter temperature. Besides, there is not the influence of a warm current, such as the continuation of the Gulf Stream along the northern coast of Europe, and the Kuroshio current on the eastern coast of Asia.

THE VITICULTURAL INDUSTRY.

The following tables of the viticultural products of the United States for 1890 are taken from the latest bulletin issued from the Census Bureau, dated March 10, 1891.

The first table gives the total area and production of vineyards and the value invested for each county in the State of California in the viticultural belts of the State, while the second table gives the same data for the United States, by States. The data is new, and also extremely valuable and interesting.

For the purposes of the investigation, the products of viticulture were divided under three distinct heads, namely, grapes for table use, grapes for raisins, and grapes for wine.

The data was prepared by H. Gardner, of the United States Census Bureau, under charge of Robert L. Porter, Superintendent of Census:

AREA AND PRODUCTION OF VINEYARDS, AND CAPITAL INVESTED, IN THE PACIFIC DIVISION OF THE UNITED STATES.

PACIFIC DIVISION.	Area in Bearing Vines—Acres.	Area in Non-bearing Vines—Acres.	Average Yield of Grapes per Acre—Tons.	Market Value of Grapes per Ton.	Grapes Sold for Table Use—Tons.	Grapes Sold to Wineries—Tons.	Wine Made—Gallons.	Market Value of Wine per Gallon.	Raisins Produced (20 pounds to box)—Boxes.	Market Value of Raisins per Box.	Total Value of Plant Including Land.	Total Laborers Employed (all kinds).
Arizona.....	1,000	1,500	3.00	\$16 50	2,850	150	25,000	\$1 00	---	---	\$75,000	1,280
California:												
Alameda County.....	6,500	1,625	1.50	17 66	600	9,150	1,000,000	19	---	---	4,062,500	4,000
Alameda County.....	1,000	250	1.50	17 66	100	1,400	80,000	19	---	---	360,000	640
Butte County.....	1,800	100	1.94	17 66	1,000	200	32,000	19	11,800	\$1 60	560,000	450
Calaveras County.....	1,440	360	1.51	17 66	400	1,760	115,200	19	800	1 60	720,000	900
Colusa County.....	506	126	2.13	17 66	1,060	42	40,500	19	---	---	221,200	300
Contra Costa County.....	4,000	1,000	1.50	17 66	700	5,300	320,000	19	---	---	2,000,000	2,500
El Dorado County.....	1,600	400	1.50	17 66	600	1,800	128,000	19	---	---	700,000	1,000
Fresno County.....	16,000	3,750	1.75	17 66	360	9,000	1,200,000	19	626,595	1 60	7,900,000	9,900
Inyo County.....	86	24	1.44	17 66	30	107	7,600	19	---	---	41,650	60
Kern County.....	750	187	1.50	17 66	150	975	60,000	19	---	---	237,950	470
Lake County.....	1,185	246	1.50	17 66	900	877	78,800	19	---	---	500,850	700
Los Angeles County.....	18,120	4,530	1.51	17 66	1,000	25,820	1,342,800	19	20,000	1 60	11,825,000	11,500
Marin County.....	520	130	1.50	17 66	100	680	41,600	19	---	---	227,500	300
Mariposa County.....	500	125	1.50	17 66	100	650	40,000	19	---	---	218,750	300
Mendocino County.....	208	27	1.50	17 66	400	312	8,700	19	---	---	82,250	150
Merced County.....	2,014	128	2.36	17 66	1,000	2,621	16,000	19	58,400	1 60	856,800	1,100
Monterey County.....	500	50	2.00	17 66	1,000	24,386	3,000,000	19	---	---	191,500	300
Napa County.....	16,611	4,162	1.50	17 66	530	312	18,800	19	---	---	102,900	1,500
Nevada County.....	235	59	1.50	17 66	40	3,620	177,700	19	19,400	1 60	1,270,000	1,600
Placer County.....	2,621	555	1.72	17 66	3,620	311	872,850	19	9,000	1 60	3,232,400	4,000
Sacramento County.....	6,465	1,616	1.54	17 66	3,050	6,647	8,800	19	---	---	4,735,450	6,850
San Benito County.....	110	27	1.98	17 66	25	130	279,000	19	---	---	1,000,000	1,250
San Bernardino County.....	9,562	4,125	1.50	17 66	1,700	6,000	80,000	19	375,000	1 60	4,735,450	6,850
San Diego County.....	6,000	7,500	1.76	17 66	1,220	8,280	160,000	19	150,000	1 60	1,000,000	1,250
San Francisco County.....	2,000	500	1.50	17 66	1,840	1,160	160,000	19	---	---	275,500	300
San Joaquin County.....	1,166	1,166	1.50	17 66	1,166	1,166	160,000	19	---	---	275,500	300
San Luis Obispo County.....	1,166	1,166	1.50	17 66	1,166	1,166	160,000	19	---	---	275,500	300
San Mateo County.....	1,166	1,166	1.50	17 66	1,166	1,166	160,000	19	---	---	275,500	300
San Ysidro County.....	1,166	1,166	1.50	17 66	1,166	1,166	160,000	19	---	---	275,500	300
Tulare County.....	4,500	875	2.06	17 66	6,700	2,000	15,250	19	10,000	1 60	1,881,250	2,700
Yuba County.....	8,481	798	1.91	17 66	1,600	1,040	71,200	19	---	---	383,500	560
Yuba County.....	185	41	1.50	17 66	1,600	3,698	265,200	19	48,000	1 60	1,720,000	2,150
Yuba County.....	1,166	1,166	1.50	17 66	1,166	1,166	160,000	19	---	---	275,500	300
New Mexico.....	1,166	8,000	3.00	45 00	1,779	1,779	268,500	86	---	---	3,055,800	5,068
Totals.....	157,458	55,772	---	---	43,414	*173,037	14,947,500	---	1,372,195	---	\$89,771,150	106,765

* This table does not include for California 41,166 tons made into raisins, and 23,252 tons used for dried grapes and purposes other than table fruit.

TOTAL AREA AND PRODUCTION OF VINEYARDS, AND CAPITAL INVESTED, IN THE UNITED STATES, BY STATES.

STATES.	Area in Bearing Vines—Acres.	Area in Non-Bearing Vines—Acres.	Average Yield of Grapes per Acre—Tons.	Market Value of Grapes per Ton.	Grapes Sold for Table Use—Tons.	Grapes Sold to Wineries—Tons.	Wine Made—Gallons.	Market Value of Wine per Gallon ^a .	Total Value of Plant, Including Land.	Total Laborers Employed—All Kinds.
Arizona.....	1,000	1,500	3.00	\$18 60	2,850	150	25,000	\$1 00	\$75,000	1,250
California.....	155,272	45,272	41.77	17 68	38,785	\$235,526	14,626,350	19	86,640,350	100,422
Georgia.....	1,938	2,154	1.33	96 00	1,938	646	107,686	1 15	1,227,800	2,046
Illinois.....	3,750	990	2.00	64 00	6,000	1,500	250,000	1 00	1,422,000	2,370
Indiana.....	3,850	1,000	1.75	67 00	5,390	1,347	224,500	1 00	1,455,000	2,425
Kansas.....	4,542	1,000	2.00	58 00	8,294	790	130,940	80	1,662,800	2,771
Missouri.....	10,000	1,764	3.00	50 00	22,500	7,500	1,250,000	56	4,606,800	5,882
New Mexico.....	1,186	9,000	3.00	45 00	1,779	1,779	296,500	86	3,065,800	5,063
New York.....	43,350	7,650	1.75	70 00	60,687	15,172	2,528,250	50	20,400,000	25,500
North Carolina.....	4,000	1,200	1.75	60 00	4,657	2,333	388,833	1 00	1,560,000	2,600
Ohio.....	28,087	4,956	1.80	57 00	38,947	11,909	1,984,833	56	13,217,200	16,521
Tennessee.....	1,500	800	2.50	89 00	2,500	1,250	208,333	1 00	630,000	1,050
Virginia.....	4,100	1,600	2.00	60 00	5,434	2,786	461,000	1 00	1,710,000	2,850
Other States and Territories.....	45,000	15,000	2.00	60 00	67,500	22,500	1,875,000	1 00	18,000,000	30,000
Totals.....	307,575	93,686	-----	-----	267,271	384,368	24,306,905	-----	\$155,661,150	+200,780

NOTE.—There were 1,372,195 twenty-pound boxes of raisins produced in the United States, of which the entire lot came from California. The market value is \$1 60 per box.

^aThe price of wine, as given for the various divisions and States in the tables of this bulletin, is that of the producer, being the home or farm value, and not the export or commercial value. It may have passed through several hands. Vitiiculture is shown to be one person to two acres, the average for those directly employed in growing the grapes is but one person to three acres. The number of laborers employed in the curing of raisins, manufacture of wine, transportation of products, etc., is not shown. The average yield of grapes per acre for California was in the year 1889 (the census crop), considerably reduced by the heavy rains in October, coming a month before the grapes were harvested, and destroying a large percentage of the crop. The usual yield of grapes per acre in California is from one and a half to ten tons, the latter being for table use, and the former for wine. The yield of grapes for wine is not shown, but is known to be from one and a half to ten tons per acre. The yield of grapes for table use is not shown, but is known to be from one and a half to ten tons per acre. The yield of grapes for wine is not shown, but is known to be from one and a half to ten tons per acre. The yield of grapes for table use is not shown, but is known to be from one and a half to ten tons per acre.

CALIFORNIA.

There are fifty-three counties in California, nearly all producing grapes in a greater or less degree, the larger proportion of them producing for home consumption or export. There is an established demand for this wine to the amount of 1,000,000 gallons per month from this country alone, making 12,000,000 gallons annually, and an exportation to foreign countries of 311,920 gallons in 1889, valued at \$217,093.

California may be divided into three grape-growing districts: The first, which includes Sonoma, Lake, Napa, Alameda, Santa Clara, and Santa Cruz Counties; the Sierra Nevada foothill and Sacramento Valley district, which includes Placer, El Dorado, Calaveras, Tuolumne, Yuba, Colusa, Butte, Sacramento, and Tehama Counties; and the southern district, which includes San Joaquin, Merced, Fresno, Tulare, Kern, Ventura, Santa Barbara, San Bernardino, Los Angeles, and San Diego counties.

In the first district the finer grades of white and red dry wines are made. The choice varieties of the French and German types seem to come over to reproducing themselves here than elsewhere. In this district the successfully grown the finest varieties of French champagne grapes, which yield a handsome profit to the producers. There is one cellar in this district with a capacity of 800,000 bottles, producing champagne by natural fermentation in the bottle. The champagne industry in California is a growing one, and its future is bright with promise. While wine is the leading viticultural product, fine table grapes are also produced in this district.

Some good, wholesome dry wines are produced in the second district, but they are of a different character from the German and French types. Grapes for table use and raisins are extensively grown, a large portion of the new plantings being for raisins.

In the Sacramento and San Joaquin Valleys, and in the southern district, some excellent dry wines are produced, but these valleys excel in Port, Muscatel, Angelica, and other heavy sweet wines.

For the purposes of this bulletin it is only necessary to treat of the principal counties in each district where the heaviest viticultural products are found.

First District.

In Napa County there are 20,763 acres. Phylloxera has destroyed many acres of vines in this county, but the acreage has been kept up to about the same point by replanting on resistant stock and the planting of new vineyards farther up on the foothills, where a choice variety of grapes is grown and phylloxera is not such a scourge. There are 142 cellars in Napa, many of them of modern construction, containing the appliances for the manufacture and handling of wines. There are 3,000,000 gallons of wine made in this county in the year 1889. Sonoma County, in 1889, had 21,683 acres of bearing vineyards. The same conditions exist here relative to the quality of grapes and wines produced as in Napa. The ravages of phylloxera were felt in Sonoma an earlier day than in Napa, appearing about 1874, and a great many vineyards were destroyed. It is now generally believed that the destruction caused by the phylloxera can be stayed by growing the same resistant stock and grafting upon that the foreign vinifera. In

Sonoma County, in 1889, there were produced about 1,756,300 gallons of wine and 250,000 gallons of brandy. The quality of the wines was marked.

Santa Clara County contains some 10,000 acres of bearing vines and should enjoy a reputation for fine white and red wines of Sonoma and Napa. This and Santa Cruz County, in 1889, produced 2,544,000 gallons of wine. As yet the phylloxera has troubled the vineyards but little in comparison with the counties before mentioned. It is said to be a deep gravelly bed underlying this whole surface, and the growers say the phylloxera does not work with success. Santa Clara County has 6,500 acres of bearing vines, and produces a type of wine resembling the white and red wines of France, and in that part of the district known as the "Livermore District," a high grade of wine and claret is produced. The geological formation of the valley slopes of the Mount Diablo range more nearly reproduce the conditions that characterize the Department of the Gironde in France than any other section on the coast. In this district there were produced in 1889 some 60,000 gallons of wine, noted more for the quality than the quantity which it produces. This is comparatively a new vine district, and has grown up within the last decade. The first systematic planting of high grade grapes began in 1882.

Second District.

There is in the second district a great viticultural interest, in table grapes, raisins, sweet and dry wines, and brandies, exceeding the latter. Sacramento, Placer, El Dorado, Tehama, Yuba, Butte, and Colusa Counties produce large quantities of table grapes, and quite a quantity of raisins is shipped from these counties. Tehama has the largest vineyard in the world, 3,800 acres, to which the manager says 1,000 new vines are to be added within a year. There were in the vineyard on this vineyard in April, 1890, when visited by the special agent of the Census Office, 300,000 gallons of brandy and 1,000,000 gallons of wine. Another large vineyard, the second largest in the State, contains 2,000 acres, and is situated at Natoma, Sacramento County. The winery adjoining the vineyard has a capacity of 600,000 gallons. Many of the grapes are shipped from this vineyard to the eastern markets. Exports in this direction have largely increased during the past two years.

Third District.

The third district is composed of San Joaquin, Merced, Tulare, Kern, Ventura, Santa Barbara, Los Angeles, San Bernardino, Orange, and San Diego Counties. Near Stockton, in San Joaquin County, is located one of the largest vineyards and wineries. Brandies are made in this district; also sherries, ports, and excellent clarets.

Fresno County contains at this time some 16,000 acres of bearing vines and 15,000 acres of new plantings, the larger portion of which is grown for raisins. There are, however, a great many gallons of wine and brandy made in this county. The wines are mostly of excellent quality. The raisin pack in 1889 was 626,595 boxes; in 1890, 1,200,000 gallons.

The California "Wines and Vines," speaking of the Muscatel de Pedro Blanco, the true raisin grape, says: "The soil seems to impart a special character to the vines that is unknown elsewhere in the world. The second crop is often very nearly equal to the first, and the third comes before the leaves fall off."

More than half the raisin grapes grown in California are produced in San Bernardino County. San Bernardino County is also principally devoted to the growing of raisin grapes. There are 9,562 acres of bearing and 15,000 acres of non-bearing vines, and the raisin pack in 1889 amounted to 75,000 boxes. Two wineries in San Bernardino County produced 100,000 gallons of wine in 1889. There were also shipped from this district 1,700 tons of table grapes. Los Angeles County has 18,120 acres of bearing vines. A new and mysterious disease attacked the vines of the southern portion of this district about 1885, and ruined more than one half of the acreage. Every effort has been made to discover the cause and remedy the evil. The most expert scientists have been called by the State Board of Viticulture in California, and the Department of Agriculture appointed an expert to investigate and report upon the matter. There were produced in Los Angeles County in 1889 30 tons, or 51,640,000 pounds, of grapes for wine, and 1,000 tons, or 2,000,000 pounds, of grapes for table purposes. The wines in this county are justly celebrated, and were the first shipped from California to the eastern markets. This county excels in its sherries, ports, and brandies. In 1889 there were 20,000 boxes of raisins packed in 1889, the new disease having reduced the product about one half.

The product of Orange, a county lately formed from portions of Los Angeles County, is included in the above figures.

In San Diego County there is an acreage of 6,000 bearing and 7,500 non-bearing vines. Of the latter, 6,000 were just coming into bearing in 1889, and did not add much to the product. While this shows a fair increase in the growth of the industry during the last four years, the increase is accounted for by the fact that the new disease that was so disastrous in Los Angeles did not affect San Diego County. It is in the El Cajon Valley of San Diego County that the most progress has been made in viticulture. There are 27,000 acres adapted to fruit growing and 13,000 acres of bearing raisin vineyards in El Cajon. The raisins from this valley are among the finest produced in California. The product of the El Cajon Valley in 1889 was 75,000 boxes; in the balance of the year the pack was 75,000 boxes; in all, 150,000 boxes. Another successful branch of viticulture in this district is the shipment of table grapes to the eastern markets. Many of the elevated localities are so free from frost that grapes can be left on the vines until January.

A Large Grapevine.

It has been noted in this bulletin that California has the largest vineyard in the world, it may be well to state that she has also the oldest. It is a vineyard consisting of a single vine, in Santa Barbara County. It was planted by a Mexican woman about sixty-eight years ago, and has a diameter one foot from the ground of twelve inches, its branches covering an area of 12,000 feet, and produces annually from 100 to 12,000 pounds of grapes of the Mission variety (many bunches weighing six or seven pounds), the crop being generally made into wine.

The old lady who planted this one-vine vineyard died in 1886, age of 107.

Viticulture, already a great industry in the Pacific division, is to become still greater in the near future.

The census investigation of viticulture shows that outside of the larger districts already mentioned there are probably 45,000 acres bearing and 15,000 acres of non-bearing vines, an aggregate of vineyards from one fourth of an acre upward, grown to supply the demand for this healthy and delicious fruit, and a like demand for wine. This class of vineyards is to be found in every State and Territory of the Union, producing, in 1889, 67,500 tons of table grapes, and 1,875,000 gallons of wine. These small vineyards are more or less experimental, and, when proved a success in a small way, will doubtless lead to larger enterprises. In localities where the industry has thrived in past years, and has been abandoned on account of mildew and black rot, now that the United States Government, through its Department of Agriculture, is so successfully experimenting in regard to the causes of the diseases and the remedies applied to save the vines, and the favorable results are being manifested, a new interest is being manifested, and no doubt, when another year has passed, the grape industry will be again successful and increased in many of the now comparatively small grape sections.

TRANSACTIONS

OF THE

FIRST DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of San Francisco and Alameda.

REPORT.

OFFICERS OF THE ASSOCIATION.

OAKLAND, December 31, 1890.

ROBERT McKILLICAN
JOSEPH I. DIMOND
UNION NATIONAL BANK OF OAKLAND.....

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the First District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

JOS. I. DIMOND,
Secretary.

DIRECTORS.

ROBERT McKILLICAN
PETER PUMYEA
H. LATHAM
W. M. KENT
E. P. DALTON
ELI S. DENISON
GEORGE BEMENT
C. S. CRITTENDEN

RECEIPTS AND EXPENDITURES.

Receipts.

miscellaneous account.....	\$5,332 06
brothers and pacers.....	8,250 00
season tickets.....	757 00
gates.....	3,772 95
sweepstakes and herds.....	210 00
runners.....	487 50
	<u>\$18,809 51</u>

Expenditures.

miscellaneous account.....	\$1,236 13
Park expenses.....	3,178 57
commission on sale of season tickets.....	32 90
labor.....	1,017 50
brothers and pacers.....	10,190 00
runners.....	4,657 50
premiums.....	2,372 25
advertising and printing.....	1,453 95
	<u>\$14,098 80</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBREDS—STALLIONS.		
Imp. Brutus, three years old and over.	Wm. Boots.	Milpitas
Rathbone, three years old and over.	Jos. Cairn Simpson.	Oakland
Duke of Milpitas, two years old.	Wm. Boots.	Milpitas
Sir Walter, two years old.	Wm. Boots.	Milpitas
Laurelwood, one year old.	W. L. Appleby.	Santa Clara
Elmwood, one year old.	Wm. Boots.	Milpitas
Bay colt, under one year.	Wm. Boots.	Milpitas
MARES.		
Raindrop, three years old and over.	W. L. Appleby.	Santa Clara
Santa Cruz, three years old and over.	Jos. Cairn Simpson.	Oakland
Mollie H and three colts.	Wm. Boots.	Milpitas
CLASS II—STANDARD TROTTERS—STALLIONS.		
Eros, four years old and over.	La Siesta Ranch.	Menlo Park
Anthedon, four years old and over.	Jos. Cairn Simpson.	Oakland
Antecello, three years old.	Jos. Cairn Simpson.	Oakland
Kafir, three years old.	B. C. Holly.	Vallejo
Kodac, two years old.	I. Ayres.	San Francisco
Sausalito, one year old.	La Siesta Ranch.	Menlo Park
—, under one year.	La Siesta Ranch.	Menlo Park
MARES OR GELDINGS.		
Wanda, four years old and over.	La Siesta Ranch.	Menlo Park
Lady Nutwood, four years old and over.	E. Topham.	Milpitas
Silvia, three years old.	E. Topham.	Milpitas
Daylight, three years old.	La Siesta Ranch.	Menlo Park
Neva, two years old.	B. C. Holly.	Vallejo
Myletta, two years old.	I. Ayres.	San Francisco
Luck, under one year.	La Siesta Ranch.	Menlo Park
FAMILIES.		
Eros and five colts.	La Siesta Ranch.	Menlo Park
Lady Nutwood and two colts.	E. Topham.	Milpitas
CLASS III—HORSES OF ALL WORK—STALLIONS.		
Billy Tinker, three years old and over.	J. E. Martin.	Brentwood
Matta, three years old and over.	Isaac Bottomly.	Temescal
T O, two years old.	T. Lamoureux.	Oakland
Acorn, one year old.	B. E. Harris.	San Francisco
Sargon, one year old.	I. Ayres.	San Francisco
Douglas, under one year.	B. E. Harris.	San Francisco
MARES.		
Clara B, three years old and over.	W. B. Coleman.	Oakland
Brownie H, three years old and over.	L. Hewlett.	Oakland
Starlight, two years old.	B. E. Harris.	San Francisco
Sidena, one year old.	B. E. Harris.	San Francisco
Hera, one year old.	I. Ayres.	San Francisco
Lena Bowles and two colts.	B. E. Harris.	San Francisco
CLASS IV—CLEVELAND BAYS—STALLIONS.		
Elegance, three years old and over.	G. W. Stimpson.	Oakland
Lady Cleveland, under one year.	G. W. Stimpson.	Oakland

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS V—NORMANS AND PERCHERONS—STALLIONS.			
—, three years old and over.	J. C. Smith.	Oakland	1st prem.
—, three years old and over.	J. C. Smith.	Oakland	2d prem.
—, two years old.	J. C. Smith.	Oakland	1st prem.
MARES.			
—, three years old and over.	J. C. Smith.	Oakland	1st prem.
—, three years old and over.	J. C. Smith.	Oakland	2d prem.
—, one year old.	J. C. Smith.	Oakland	1st prem.
— and two colts.	J. C. Smith.	Oakland	1st prem.
CLASS VII—CARRIAGE HORSES.			
— and best.	W. H. Bailey.	Alameda	1st prem.
—	Joel Merchant.	San Francisco	2d prem.
CLASS VIII—GENTLEMEN'S ROADSTERS—SPAN.			
— and Jolly Boy.	B. E. Harris.	San Francisco	1st prem.
— B and Eve O.	J. N. Killip.	San Francisco	2d prem.
WHOLE MARK OR GELDING.			
—	B. E. Harris.	San Francisco	1st prem.
—	E. Newland.	Oakland	2d prem.
CLASS IX—FARM HORSES—TEAMS.			
— and Beck.	Geo. Bement.	Maple Grove	1st prem.
— and Bill.	W. H. Hinchman.	Oakland	2d prem.
FARM TEAM IN WALKING MATCH.			
— and Spider.	W. H. Hinchman.	Oakland	1st prem.
— and Dick.	Geo. Bement.	Maple Grove	2d prem.
MARE OR GELDING.			
—	Geo. Bement.	Maple Grove	1st prem.
—	W. H. Hinchman.	Oakland	2d prem.
CLASS X—SADDLE HORSES.			
—	W. H. Bailey.	Alameda	1st prem.
— Chief.	Dr. G. E. Brinkerhoff.	Oakland	2d prem.
CLASS XI—SWEEPSTAKES—STALLIONS.			
— Wilkes.	I. Ayres.	San Francisco	1st prem.
—	E. Topham.	Milpitas	2d prem.
—	B. E. Harris.	San Francisco	Sp. men.
MARES.			
— Nutwood.	E. Topham.	Milpitas	1st prem.
—	B. E. Harris.	San Francisco	2d prem.
CLASS I—DURHAMS—BULLS.			
— Kirklevington of Forest Home, three years old and over.	C. Younger & Son.	San José	1st prem.
— Kirklevington of Forest Home, two years old.	C. Younger & Son.	San José	1st prem.
— Kirklevington of Forest Home, one year old.	C. Younger & Son.	San José	1st prem.
— Kirklevington of Forest Home, under one year.	C. Younger & Son.	San José	2d prem.
— Duke, under one year.	C. Younger & Son.	San José	1st prem.
COWS.			
— of Forest Home, three years old and over.	C. Younger & Son.	San José	1st prem.
— Maynard, three years old and over.	C. Younger & Son.	San José	2d prem.
— Rose, two years old.	C. Younger & Son.	San José	1st prem.
— Belle, two years old.	C. Younger & Son.	San José	2d prem.
— Maynard, one year old.	C. Younger & Son.	San José	1st prem.
— Dolly, under one year.	C. Younger & Son.	San José	2d prem.

TRANSACTIONS OF THE
FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
HERDS.		
Over two years—Bull: 26th Kirklevington of Forest Home; cows: Jessie Maynard 3d, 14th Rose of Forest Home, Jessie Maynard 4th, 21st Rose of Forest Home	C. Younger & Son	San José
Under two years—Bull: Belle's Duke; cows: Jessie Maynard 5th, Bonnie Belle 7th, Jessie Maynard 6th, Red Dolly 35th	C. Younger & Son	San José
SWEEPSTAKES.		
Bull—26th Kirklevington of Forest Home	C. Younger & Son	San José
Cow—21st Rose of Forest Home	C. Younger & Son	San José
CLASS II—HEREFORDS—COWS.		
Pigeon, one year old	Geo. Bement	Maple Grove
SWEEPSTAKES.		
Cow—Pigeon	Geo. Bement	Maple Grove
CLASS III—POLLED ANGUS—COWS.		
Yolo, three years old and over	Thomas Ward	Oakland
SWEEPSTAKES.		
Cow—Yolo	Thomas Ward	Oakland
CLASS V—AYRSHIRES—BULLS.		
Red Mikado, three years old and over	Geo. Bement & Son	Maple Grove
Forest, one year old	Geo. Bement & Son	Maple Grove
Frazier, under one year	Geo. Bement & Son	Maple Grove
COWS.		
Lady Faxon, three years old and over	Geo. Bement & Son	Maple Grove
Manon, three years old and over	Geo. Bement & Son	Maple Grove
Sabrina, two years old	Geo. Bement & Son	Maple Grove
Satilla, one year old	Geo. Bement & Son	Maple Grove
Manon 2d, under one year	Geo. Bement & Son	Maple Grove
HERDS.		
Over two years—Bull: Red Mikado; cows: Lady Faxon, Manon, Sybilla, Sabrina	Geo. Bement & Son	Maple Grove
Under two years—Bull: Faust; cows: Satilla, Favonia, Manon 2d, Songstress	Geo. Bement & Son	Maple Grove
SWEEPSTAKES.		
Bull—Red Mikado	Geo. Bement & Son	Maple Grove
Cow—Sybilla	Geo. Bement & Son	Maple Grove
CLASS VI—JERSEYS, ALDERNEYS, AND GUERNSEYS—BULLS.		
Duke of Alameda, three years old and over	S. Haxby	Alameda
Alameda Chief, three years old and over	Thomas Ward	Oakland
On Docking, two years old	Thomas Ward	Oakland
COWS.		
Oakland Queen, three years old and over	Thomas Ward	Oakland
Bonita, three years old and over	Thomas Ward	Oakland
Buttercup, two years old	Thomas Ward	Oakland
Annette, one year old	Thomas Ward	Oakland
Lady Maud, under one year	Thomas Ward	Oakland
HERDS.		
Over two years—Alameda Chief and four cows	Thomas Ward	Oakland
Under two years—On Docking and four heifers	Thomas Ward	Oakland

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
SWEEPSTAKES.			
Duke of Alameda	S. Haxby	Alameda	1st prem.
Melanda Jane	Thomas Ward	Oakland	1st prem.
CLASS VII—HOLSTEINS—BULLS.			
King of Menlo, three years old and over	Frank H. Burke	Menlo Park	1st prem.
Kathleen's Pride, two years old	Frank H. Burke	Menlo Park	1st prem.
Sedro, one year old	Frank H. Burke	Menlo Park	1st prem.
Joe's Last, one year old	Frank H. Burke	Menlo Park	2d prem.
Belvidere, under one year	Frank H. Burke	Menlo Park	1st prem.
COWS.			
Joe, three years old and over	Frank H. Burke	Menlo Park	1st prem.
Joe, three years old and over	Frank H. Burke	Menlo Park	2d prem.
Lelia 2d, two years old	Frank H. Burke	Menlo Park	1st prem.
Lincoln 2d, two years old	Frank H. Burke	Menlo Park	2d prem.
Joe, one year old	Frank H. Burke	Menlo Park	1st prem.
Joe's Dyne, under one year	Frank H. Burke	Menlo Park	1st prem.
HERDS.			
Two years—King of Menlo and four cows	Frank H. Burke	Menlo Park	1st prem.
Two years—Troy Sedro and four cows	Frank H. Burke	Menlo Park	1st prem.
SWEEPSTAKES.			
King of Menlo	Frank H. Burke	Menlo Park	1st prem.
Kyleess	Frank H. Burke	Menlo Park	1st prem.
CLASS VIII—GRADED CATTLE—COWS.			
Blossom, three years old and over	C. Younger & Son	San José	1st prem.
Joe, two years old	C. Younger & Son	San José	1st prem.
Joe, one year old	W. H. Hinchman	Oakland	1st prem.
CLASS XII—SHROPSHIRE SHEEP.			
Joe, two years old and over	A. Smith	Redwood City	1st prem.
Joe, one year old	A. Smith	Redwood City	1st prem.
Joe, three ram lambs	A. Smith	Redwood City	1st prem.
Joe, three ewes, two years old and over	A. Smith	Redwood City	1st prem.
Joe, three ewes, one year old	A. Smith	Redwood City	1st prem.
Joe, three ewe lambs	A. Smith	Redwood City	1st prem.
Joe, one ram and five ewes	A. Smith	Redwood City	1st prem.
CLASS XIV—BERKSHIRE SWINE.			
Joe, two years old and over	A. Smith	Redwood City	1st prem.
Joe, six months old and under one year	A. Smith	Redwood City	1st prem.
Joe, two years old and over	A. Smith	Redwood City	1st prem.
Joe, one year old	A. Smith	Redwood City	1st prem.
Joe, six months old and under one year	A. Smith	Redwood City	1st prem.
Joe, not less than five of her sucklings, not less than one month old	A. Smith	Redwood City	1st prem.
CLASS XV—ESSEX SWINE.			
Joe, two years old and over	Geo. Bement & Son	Maple Grove	1st prem.
Joe, six months old and under one year	Geo. Bement & Son	Maple Grove	1st prem.
Joe, one year old	Geo. Bement & Son	Maple Grove	1st prem.
Joe, six months old and under one year	Geo. Bement & Son	Maple Grove	1st prem.
Joe, two years old and over	Geo. Bement & Son	Maple Grove	1st prem.
CLASS XVI—POLAND-CHINA SWINE.			
Joe, two years old and over	A. Smith	Redwood City	1st prem.
Joe, one year old	A. Smith	Redwood City	1st prem.
Joe, two years old and over	A. Smith	Redwood City	1st prem.
Joe, one year old	A. Smith	Redwood City	1st prem.
Joe, three months old and under one year	A. Smith	Redwood City	1st prem.
Joe, not less than five sucklings, not less than one month old	A. Smith	Redwood City	1st prem.

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS XVIII—POULTRY, ETC.		
Best pair Light Brahmas	P. L. Earhart	Oakland
Best pair Partridge Cochins	P. L. Earhart	Oakland
Best pair Plymouth Rocks	P. L. Earhart	Oakland
Best pair White Leghorns	P. L. Earhart	Oakland
Best pair Brown Leghorns	P. L. Earhart	Oakland
Best pair White-faced Black Spanish	P. L. Earhart	Oakland
Best pair Golden Spangled Polish	P. L. Earhart	Oakland
Best pair Houdans	P. L. Earhart	Oakland
Best pair Wyandottes	P. L. Earhart	Oakland
Best pair Bronze turkeys	P. L. Earhart	Oakland
Best pair Toulouse geese	P. L. Earhart	Oakland
Best pair Aylesburg ducks	P. L. Earhart	Oakland
Best pair Rouen ducks	P. L. Earhart	Oakland
Best pair Pekin ducks	P. L. Earhart	Oakland
Best and largest collection of poultry exhibited by one person or firm	P. L. Earhart	Oakland
Best pair White Guinea fowls	A. Smith	Redwood City
Best pair Belgor Carrier pigeons	Leslie McKillican	Oakland
Best pair Blue Flying Pouter pigeons	Leslie McKillican	Oakland
Best pair White Fantail pigeons	Leslie McKillican	Oakland
Best pair Trumpeter pigeons	Leslie McKillican	Oakland
Best pair Brown-red Game fowls	Leslie McKillican	Oakland
Best pair Black-breasted Game fowls	Leslie McKillican	Oakland
Best pair Black African Bantam fowls	Leslie McKillican	Oakland
Best pair Seabright Bantam fowls	Leslie McKillican	Oakland
Best and largest collection of pigeons, not less than six varieties	Leslie McKillican	Oakland
Best pair China Bantam fowls	O. F. Metcalf	Oakland

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS V—MACHINERY, IMPLEMENTS, ETC.		
Best sidehill plow	E. S. Geron	Lafayette

SPEED PROGRAMME.

MONDAY, SEPTEMBER 1, 1890.

RACE No. 1—TROTTING.

"The Dawn Purse." For three-year olds. 2:40 Class. Purse, six hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lynette, b. f., by Lynwood; dam, Lady Bell	U. S. Gregory	Ione.
Corral, b. f., by Electioneer; dam, Columbine	Palo Alto Stock Farm	Menlo Park.
Corral, b. c., by Antevolo; dam, Ruby	Joseph Cairn Simpson	Oakland.
Corral, b. f., by Guy Wilkes; dam, Lynette	San Mateo Stock Farm	San Mateo Co.
Corral, b. f., by Dexter Prince; dam, unknown	L. M. Morse	Lodi.

SUMMARY.

Lynette	1	1	1
Corral	3	2	2
Corral	2	3	3

Time—2:30; 2:34; 2:36.

RACE No. 2—TROTTING.

"The Stamboul Purse." 2:27 Class. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Corral, b. s., by Mambrino Wilkes; dam, Fanny Fern	San Miguel St'k Farm	Alameda Co.
Corral, b. s., by Hawthorne; dam, by Mc-Bracken's Black Hawk	L. U. Shippee	Stockton.
Corral, b. m., by Sidney; dam, Nellie Lambert	San Mateo Stock Farm	San Mateo Co.
Corral, b. s., by General Lee; dam, Sister A	Geo. W. Theuerkauf	Gonzales.
Corral, b. m., by Altoona; dam, by Conway's	B. C. Holly	Vallejo.

SUMMARY.

Sister V	1	1	1
Lee	2	2	3
Balkan	4	4	2
Moses S.	3	3	4

Time—2:23½; 2:24½; 2:22½.

RACE No. 3—TROTTING.

"The Electioneer Purse." 2:20 Class. Purse, one thousand two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	
Express, b. g., by Electioneer; dam, Esther	Palo Alto Stock Farm	
Maggie E, b. m., by Nutwood; dam, by Geo. M. Patchen	Emerson & Berry	
Emma Temple, b. m., by Jackson Temple; dam, Emigrant	Agnew Stock Farm	
Hazel Wilkes, ch. m., by Guy Wilkes; dam, Blanche	San Mateo Stock Farm	
Victor, br. s., by Echo; dam, by Woodburn	Geo. A. Doherty	

SUMMARY.

Hazel Wilkes	1
Emma Temple	2
Express	3
Victor	4

Time—2:23½; 2:22; 2:20½.

TUESDAY, SEPTEMBER 2, 1890.

RACE No. 4—TROTTING.

"The Mountain Boy Purse." 3:00 Class. Guaranteed purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	
Una Wilkes, b. m., by Guy Wilkes; dam, unknown	San Mateo Stock Farm	
Lenmar, b. s., by Admar; dam, Lenore	A. T. Hatch	
Beaury Mc, b. g., by Nephew; dam, by Alexander	Percy Williams	
Bob Mason, b. s., by Echo; dam, unknown	E. B. Gifford	
Ed Fay, b. g., by Whiteman's Hambletonian; dam, by Geo. M. Patchen	Griffin & Moran	

SUMMARY.

Una Wilkes	2
Beaury Mc	1
Ed Fay	3
Bob Mason	4

Time—2:24½; 2:25½; 2:26½; 2:28.

RACE No. 5—PACING.

2:30 Class. Purse, eight hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	
Sunrise, ch. m, by Regent; dam, by Rysdyk's Hambletonian	John McConnell	
Hummer, ch. g., by Sidney; dam, Humming Bird	John Garrity	
Princess Alice, blk. m., by Dexter Prince; dam, Molly	John Patterson	
Rupee, br. s., by Guy Wilkes; dam, Sable Hayward	San Mateo Stock Farm	
McGinty, b. g.	John Moran	
T B, s. g., by Juniata	Owens Bros.	

SUMMARY.

Rupee	2	1	1	1
Hummer	1	2	2	3
Sunrise	4	4	3	2
Princess Alice	3	3	dis.	

Time—2:18½; 2:19½; 2:21½; 2:21.

WEDNESDAY, SEPTEMBER 3, 1890.

RACE No. 6—RUNNING.

"El D. Carr Free Purse." For two-year olds. Purse, four hundred dollars. Five furlongs of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Chim, b. f., by Three Cheers; dam, Rosette	G. H. Kennedy	Santa Rosa.
Chim, b. c., by Flood; dam, imp. Queen Bess	Palo Alto Stock Farm	Menlo Park.
Chim, b. c., by Duke of Norfolk;		
Chim, b. c., by Duke of Norfolk;	Elmwood Stable	Santa Clara Co.
Chim, b. c., by Duke of Norfolk;	Owens Bros.	Fresno.

SUMMARY.

Nero	1
Acclaim	2
Mystery	3
Duke of Milpitas	0

Time—1:01½.

RACE No. 7—RUNNING.

For three-year olds and over. Free selling purse, four hundred dollars. Three quarters of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Albatross, b. m., by Pill Box; dam, Della Walker	M. T. Walters	Sacramento.
Albatross, b. g., by Nathan Coombs; dam, Beauty	Elmwood Stable	Santa Clara Co.
Albatross, b. g., by Three Cheers; dam, Alice	Wesley George	San José.
Albatross, b. m., by Wildidle	Thos. C. Murphy	Oakland.
Albatross, ch. s., by Jils Johnson; dam, Lev		
Albatross, b. s., by Wildidle; dam, Violarey	Matt. Storn	Sacramento.
	James H. Muse	

SUMMARY.

Albatross	1	1
Albatross	2	2
Albatross	3	3
Albatross	4	4

Time—1:15½; 1:17.

RACE No. 8—RUNNING.

For three-year olds and over. Free purse, four hundred dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.
Hotspur, b. s., by Joe Daniels; dam, Sister to Jim Douglas	Dennison Bros.
Four Aces, ch. s., by Hock Hocking; dam, Maid of the Mist	Capt. A. B. Anderson.
Tycoon, ch. g., by Shiloh; dam, Margery	Undine Stable
Carmen, ch. m., by Wildidle; dam, Nettie Brown	W. L. Appleby.
Daisy D, b. m., by Wheatly; dam, Black Maria	Owens Bros.

SUMMARY.

Tycoon
Carmen
Daisy D
Hotspur

Time—1:42.

RACE No. 9—RUNNING.

Free purse. For all ages. Purse, three hundred dollars. Nine sixteenths of a mile.

Name and Pedigree of Horse.	By Whom Entered.
Ida Glenn, ch. m., by Glen Ellen; dam, Queen	H. D. Miller
Lyda Ferguson	Undine Stable
Vinco, b. g., by Bob Wooding; dam, Mollie N.	Elmwood Stable
Kildare, ch. g., by Kyrle Daly; dam, Mistake	Matt. Storn.
Juniata, b. f., by Wildidle; dam, Monday filly	O. Appleby
Gambo, by Wildidler; dam, Dottie Dimple	N. A. Covarrubias

SUMMARY.

Kildare
Lyda Ferguson
Ida Glenn
Vinco

Time—0:55½; 0:55½.

THURSDAY, SEPTEMBER 4, 1890.

RACE No. 10—TROTTING.

"The Grand Moor Purse." Purse, one thousand dollars. For three-year olds, up to January 1, 1890, have not produced an animal with a record of 2:30 at three years of age or under.

Name and Pedigree of Horse.	By Whom Entered.
Jolly Boy, ch. c., by Leland Stanford; dam, Cora	Ben. E. Harris.
Langton, b. f., by Alfred; dam, Laura C.	Palo Alto Stock Farm.
Lynette, b. f., by Lynwood; dam, Lady Bell	U. S. Gregory.
Maud Dee, b. f., by Anteco; dam, by Nutwood	Rufus Murphy.

SUMMARY.

Lynette 1 1 1
Langton 2 3 2
Maud Dee 4 2 3
Jolly Boy 3 4 4

Time—2:35; 2:32½; 2:34½.

RACE No. 11—TROTTING.

"The Hawthorne Purse." 2:35 Class. Purse, one thousand dollars. Mile heats, best in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Ladywell, blk. f., by Electioneer; dam, Ladywell	Palo Alto Stock Farm.	San Mateo Co.
Chantilly, br. m., by Nutwood; dam, Coupon	San Mateo Stock Farm.	San Mateo Co.
Clara Z, gr. m., by Capri	Lee Shaner.	Petaluma.
Kilrain, b. s., by Hawthorne; dam, by Whip	L. U. Shippee	Stockton.
Boliver, br. g., by Buccaneer; dam, unknown	Jas. A. Dustin	San Francisco.

SUMMARY.

Ladywell 1 1 1
Chantilly 2 2 3
Clara Z 4 3 2
Kilrain 3 4 5
Boliver 5 5 4

Time—2:27½; 2:28½; 2:28½.

FRIDAY, SEPTEMBER 5, 1890.

RACE No. 13—RUNNING.

"The Golden Gate Riding Academy Free Purse." For two-year olds. Purse, four hundred dollars. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Ida B, ch. f., by Prince of Norfolk; dam, Ida B	Dennison Bros.	Sacramento.
Ida B, ch. f., by Three Cheers; dam, Rosette	G. H. Kennedy	Santa Rosa.
Ida B, ch. f., by Flood; dam, imp. Queen Bess	Palo Alto Stock Farm.	Menlo Park.
Ida B, ch. f., by Three Cheers; dam, Mistake	J. B. Chase	San Francisco.
Ida B, ch. f., by Wildidle; dam, Precious	Owens Bros.	Fresno.

SUMMARY.

Mystery 1
Acklam 2
Memo 3
Memo 0

Time—1:15.

RACE No. 14—RUNNING.

Free purse. For three-year olds and over. Purse, three hundred and fifty dollars. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Ida Glenn, ch. m., by Glen Ellen; dam, Queen.	H. D. Miller	San Francisco
Lyda Ferguson	Undine Stable	San Francisco
Vinco, b. g., by Bob Wooding; dam, Mollie N.	Elmwood Stable	San Francisco
Gambo, by Wildidler; dam, Dottie Dimple	N. A. Covarrubias	Los Angeles

SUMMARY.

Vinco	3 1
Gambo	1 1
Ida Glenn	2 1
Lyda Ferguson	4 4

Time—0:48½; 0:50½; 0:51½.

RACE No. 15—RUNNING.

Free purse. For all ages. Purse, four hundred dollars. One and one sixteenth mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Hotspur, b. s., by Joe Daniels; dam, Sister to Jim Douglas	Dennison Bros.	San Francisco
Muta, ch. f., by Wildidle; dam, imp. Mutiny	Palo Alto Stock Farm	Malibu
Raindrop, b. m., by Wildidle; dam, imp. Tear-drop	W. L. Appleby	San Francisco
Fanny F, b. m., by Wildidle; dam, Sally Hart	James H. Muse	San Francisco
Captain Al, br. s., by Kingston; dam, Black Maria	Owens Bros.	San Francisco

SUMMARY.

Hotspur	1
Captain Al	1
Fanny F	1
Muta	1

Time—1:48.

RACE No. 16—RUNNING.

Free selling purse. For three-year olds and over. Purse, four hundred dollars. One and one sixteenth of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Joe Viva, b. f., by Joe Hooker; dam, Lady Viva	Joseph Cairn Simpson	San Francisco
Albatross, b. g., by Pill Box; dam, Della Walker	M. T. Walters	San Francisco
Nerva, ch. m., by Bob Wooding; dam, Lizzie Marshall	Elmwood Stable	San Francisco
Kildare, ch. g., by Kyrle Daly; dam, Mistake	Matt. Storn	San Francisco
Applause, b. g., by Three Cheers; dam, Alice	Wesley George	San Francisco
Hernanda, by Wildidle; dam, Violarey	Jas. H. Muse	San Francisco

SUMMARY.

Applause	1
Kildare	1
Nerva	1
Joe Viva	1

Time—1:35.

SATURDAY, SEPTEMBER 6, 1890.

RACE No. 17—TROTTING.

The Director Purse." 2:24 Class. Purse, one thousand two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sister V, br. s., by Director; dam, Imogene	A. T. Hatch	San Francisco
Wanda, ch. m., by Inca; dam, by Echo	B. C. Holly	Vallejo
Pink, b. m., by Eros; dam, Occident	La Siesta Ranch	San Mateo Co.
Guide, b. m., by Sidney; dam, Nettie Lambert	San Mateo Stock Farm	San Mateo Co.
Redwood, b. m., by Anteeo; dam, Lou Melton	McFadyen & Murphy	Santa Rosa

SUMMARY.

Sister V	4	1	1	1
Wanda	1	2	2	3
Pink	3	4	3	2
Guide	2	3	4	4
Redwood	5	5	5	5

Time—2:24; 2:22; 2:22½; 2:21½.

SPECIAL TROTTING.

Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Victor, b. s.	Geo. A. Doherty	Crescent Mills
Maggie E, b. m.	Emerson & Berry	San José
Flora Bell, blk. m.	San Mateo Stock Farm	San Mateo Co.
Bob Mason, b. s.	E. B. Gifford	San Diego

SUMMARY.

Maggie E	1	2	1	1
Victor	4	1	3	2
Bob Mason	3	3	2	3
Flora Bell	2	4	4	4

Time—2:22; 2:24; 2:24½; 2:23.

RACE No. 18—PACING.

Men's roadsters. Mile heats, best three in five; not to rule.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Washington, b. g.	Dr. C. W. Walker	Oakland
Oregon Boy, b. g.	W. H. Ashby	Oakland
Almont, s. s.	W. R. Birmingham	Oakland
Boy, a. g.	O. Emlay	Oakland

SUMMARY.

Washington	1	2	1
Oregon Boy	2	1	dis.
Almont	dis.		
Ashland Almont	dis.		

Time—2:37; 2:39; 2:38.

MONDAY, SEPTEMBER 8, 1890.

RACE No. 19—RUNNING.

Free purse. For two-year olds. Purse, four hundred dollars. Seven eighth mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Acclaim, b. f., by Three Cheers; dam, Rosette.	G. H. Kennedy	San Francisco
Nero, b. c., by Flood; dam, imp. Queen Bess.	Palo Alto Stock Farm	Menlo Park.
Mystery, b. f., by Three Cheers; dam, Mistake.	J. B. Chase	San Francisco

SUMMARY.

Nero
Mystery
Acclaim

Time—1:27½.

RACE No. 20—RUNNING.

Free selling race. Purse, four hundred dollars. One mile and one hundred yards.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Joe Viva, br. f., by Joe Hooker; dam, Lady Viva	Jos. Cairn Simpson	San Francisco
Albatross, b. g., by Pill Box; dam, Della Walker	M. T. Walters	San Francisco
Nerva, ch. m., by Bob Wooding; dam, Lizzie Marshall	Elmwood Stable	San Francisco
Larghetta, ch. s., by Jils Johnson; dam, Leveret	Matt. Storn	San Francisco
Applause, b. g., by Three Cheers; dam, Alice	Wesley George	San Francisco

SUMMARY.

Applause
Larghetta
Nerva
Joe Viva

Time—1:48½.

RACE No. 21—RUNNING.

Free purse. For three-year olds and over. Purse, three hundred dollars. Five eighth mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Ida Glenn, ch. m., by Glen Ellen; dam, Queen	H. D. Miller	San Francisco
La Runa, b. m., by Wildidle	Thos. C. Murphy	San Francisco
Juniata, b. m., by Wildidle; dam, Monday filly	O. Appleby	San Francisco
Installation, ch. g., by Inauguration; dam, Brown Maria	Elmwood Stable	San Francisco
Kildare, ch. g., by Kyrle Daly; dam, Mistake	Matt. Storn	San Francisco
Gambo, by Wildidler; dam, Dottie Dimple	N. A. Covarrubias	San Francisco

SUMMARY.

Gambo
Kildare
Ida Glenn
Installation

Time—1:02½.

RACE No. 22—RUNNING.

The Stanford Free Purse." A handicap for all ages. Purse, four hundred dollars. One mile and one fourth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
h. c. by Monday; dam, Precious	Palo Alto Stock Farm	Menlo Park.
ch. l. by Wildidle; dam, imported	Palo Alto Stock Farm	Menlo Park.
ch. m., by Longfield; dam, Katy	Matt. Storn	Sacramento.
br. m., by Wildidle; dam, by Monday	O. Appleby	Santa Clara.
ch. m., by Wildidle; dam, Teardrop.	W. L. Appleby	Santa Clara.

SUMMARY.

Lurline 1
Alfata 2
Raindrop 3
Ped 0
Mula 0

Time—2:08.

TUESDAY, SEPTEMBER 9, 1890.

RACE No. 23—TROTTING.

The Dexter Prince Guaranteed Purse." 2:40 Class. Purse, one thousand two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Skinner, blk. s., by Alcona, Jr.; dam, Antans	I. De Turk	Santa Rosa.
Guy Mc, b. g., by Nephew; dam, by Alexander	Percy Williams	Stockton.
Wilkes, b. m., by Guy Wilkes	San Mateo Stock Farm	San Mateo Co.
Mason, b. s.	E. B. Gifford	San Diego.
Derby, br. s.	B. C. Holly	Vallejo.

SUMMARY.

Skinner 1 1 0 1
Beauy Mc 2 2 0 2
Una Wilkes 3 3 3 3
Bob Mason 4 5 4 4
Chas. Derby 5 4 5 5

Time—2:21; 2:20½; 2:21½; 2:24.

SPECIAL TROTTING.

Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
V	Peter Brandow	San Francisco.
H. b. m.	Geo. Van Gordon	S. L. Obispo Co.
wood, b. g.	C. H. Corey	San José.
P. b. m.	D. R. Mizner	Petaluma.
H. b. g.	A. Phillips	

SUMMARY.

Prince B	5	4	1	2	1
Mattie P	4	1	2	1	2
Lena H	1	2	5	3	2
Rockwood	3	3	3	5	2

Time—2:29½; 2:31; 2:32½; 2:31; 2:33; 2:29.

SPECIAL TROTTING.

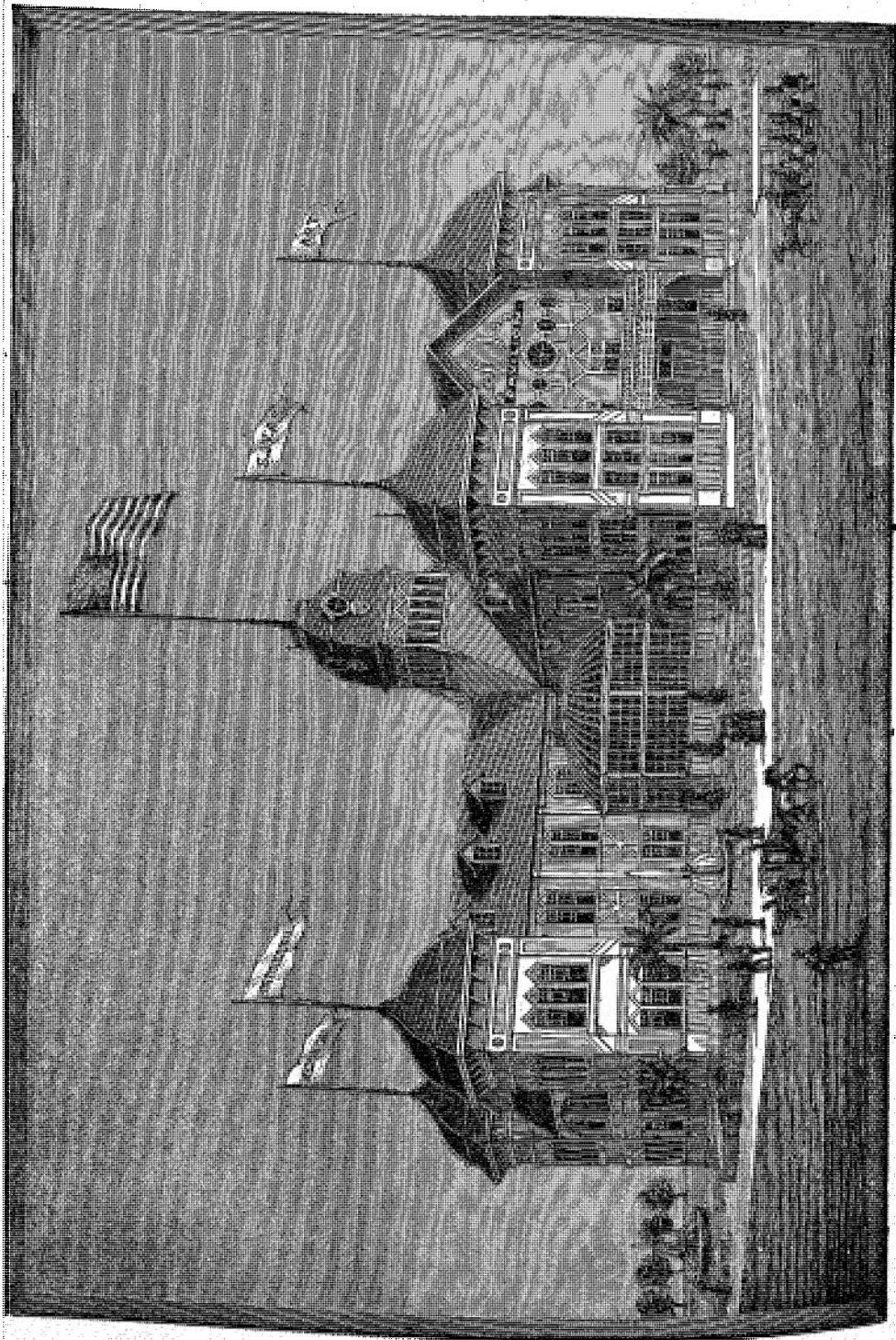
For gentlemen's roadsters. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Adm.
Pet, gr. m.	Charles Babb .....	...
Mabel, blk. m.	W. J. Wilson .....	...
Beauty, s. m.	W. W. White .....	...
Lady Dudley, b. m.	Jas. Wash .....	...
Sunset, b. g.	T. Rutherford .....	...

SUMMARY.

Pet	1	1	1
Sunset	4	3	1
Beauty	3	4	1
Mabel	2	3	2

Time—2:44; 2:40½; 2:39½; 2:42.



TRANSACTIONS

OF THE

SECOND DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of San Joaquin and Stanislaus.

STOCKTON, CALIFORNIA.

THE METROPOLIS OF THE WORLD-REOWNED SAN JOAQUIN VALLEY.

OFFICERS OF THE ASSOCIATION.

L. U. SHIPPEE
A. W. SIMPSON
J. M. LA RUE (P. O. Box 188, Stockton)
FRED. ARNOLD Supt. of

DIRECTORS.

LOUIS GERLACH
R. C. SARGENT
L. U. SHIPPEE
JOHN E. MOORE
FRED. ARNOLD
C. E. NEEDHAM
JAMES A. SHEPHERD
B. F. LANGFORD

Stockton has a population of eighteen thousand, and is situated at the head of tide-water navigation, on an estuary of the San Joaquin River, and possesses special facilities for the transaction of business and transportation of heavy freights to and from the seaboard. The road facilities are as good as those extended to any other locality. The main line of the Southern Pacific Railroad runs directly through the city. It is the starting point to the great Yosemite Valley and Big Bear. As a grain center it has no equal in this State, as grain is taken from the warehouses of Stockton by steamers and barges and carried alongside of the sea-going vessels and there discharged. About \$5,000,000 are annually disbursed by Stockton grain dealers to the grain growers of the State. Stockton is a central point for the distribution of lumber throughout the San Joaquin Valley. The schools of Stockton are second to none in the State. Graduates from the high school are admitted to the State University without having to pass an examination. Stockton is one of the largest manufacturing cities on the Pacific coast. It has four flour mills, with a capacity of five thousand barrels of flour per day, which is shipped to all parts of the globe; a large paper mill, ice manufactory, tanneries, several carriage manufactories and agricultural works, planing mills, woolen mills, foundries, etc. It is the headquarters for the manufacture of the combined harvesters. A Court House has just been completed which is the finest in the State. The climate of Stockton is mild and agreeable, and compares very favorably with that of Naples. Stockton is one of the healthiest cities in the United States, last year only one hundred and eighty deaths occurring, as compared with ten deaths to one thousand inhabitants. We have no thunder storms, blizzards, or cyclones. The country around Stockton is very productive, all kinds of grain, fruits, and vegetables being grown. Excellent opportunities are afforded those who desire to invest in land, from \$10 to \$250 per acre. There are several natural gas wells, the supply being inexhaustible. The gas is used for heating, lighting, and manufacturing purposes, and as fuel for family use.

REPORT.

STOCKTON, December,

To the honorable State Board of Agriculture:

GENTLEMEN: The Directors of the Second District Agricultural Association submit this, their report of the transactions of the association for the year ending this date.

J. M. LA RUE
Secretary

RECEIPTS AND EXPENDITURES.

Receipts.

Balance	\$1 20
From State appropriation for 1889	3,500 00
From State appropriation for 1890	3,497 50
From sale of privileges	3,301 50
From entries to sweepstakes	21 00
From sale of exhibitors' tickets	505 00
From donations (per list appended)	238 00
From rent of Pavilion	430 00
From sale of life memberships (three)	150 00
From Park and Pavilion receipts	7,143 50
From sale of hay, wagon, storage, etc.	233 00
From reinstatement, John Patterson	58 00
From receipts First Annual Record Meeting ..	416 50
From entries to races and stakes	4,920 00

Disbursements.

Paid account indebtedness of 1889	\$235 00
Paid premiums of 1890	2,347 00
Paid additional cost of Pavilion	1,205 70
Paid account bills payable	500 00
Paid interest on bills payable	1,008 00
Paid interest on overdraft account	102 00
Paid insurance on Pavilion	661 00
Paid improvements at Park	309 00
Paid general expenses, 1890	7,306 00
Paid overdrafts	1,917 50
Paid stakes and purses	8,389 25
Cash	00 00

DONATIONS, 1890.

From R. Gnekow	
From Mrs. Jos. Hale	
From Stockton Combined Harvester and Agricultural Works ..	
From S. W. Boyce	
From G. H. Shed	
From N. Nevin	
From Burton La Rue	
From Fred. Arnold	
From B. F. Langford	
From L. U. Shippee	
Total	

ANNUAL ADDRESS.

DELIVERED AT PAVILION THURSDAY EVENING, SEPTEMBER 25, 1890.

By WILL S. GREEN, of Colusa, California.

Agriculture was the first vocation of man. Man's idea of Paradise is a place where the productions of the earth grow spontaneous, and come to perfection without the application of labor. Leaving out the story of Eden, with the beautiful river to water it, in which our parents were first placed, and in which they remained until the sin of disobedience caused God to curse the land, and pronounce the sentence of labor on man, we know that the first inhabitants of every country depended on the spontaneous production of the soil, vegetable and animal, for existence. With the increasing necessities of man agriculture grew slowly, but it is the basis of all wealth, individual and social. The statesman should encourage it above all things. The government should do any and every act that will in the least promote agriculture. The annual fairs that we hold have been considered, in the past, as a means, if not the best means, to encourage progress in agricultural pursuits. We come together, in these exhibitions, to see if we cannot improve each other.

I am here to-night to say a few words hurriedly put together about California. I have snatched a few hours from the busiest month I have in a busy life, and the disappointment I have felt may be yours. But California! Who that has seen her does not love her? The aged seafarer, even, loves her with the energy and vigor of youth who has concluded that there is but one girl on earth. We know that there is but one California; but one spot on earth with such a climate, such a variety of productions. She was lovely as Nature presented her to the eye of man. She is lovely in her youth, when she has hardly taken a step in the possibilities. What of her when she comes to be old? What pen would dare attempt to portray her in the full perfection of Statehood, covered with all the beauties of her agriculture? I stand around this hall and then remember that we have not made a name; that the most sanguine of us are astonished almost every day as the possibilities unfold themselves.

The old missionary fathers became enraptured with the soil and the beauties of California. The pioneers who, urged on by a restless spirit, crossed the trackless mountain, plain, and desert, were as contented as the tired infant that falls asleep in its mother's arms. The men who touched on these shores had stories to tell, when they returned back to home ports, of a lovely spot on the shores of the grand Pacific. When a boy, stories of California, that sounded to me like a dream, came from some enchanted land where dwelt real genii, made me; and the discovery of gold, put my finger upon the map and hope for the future there. With the announcement of the discovery of gold came the great rush, and I with it. Few thought of agriculture in those days. It was a scramble for gold. A demand, however, for agricultural produc-

tions caused a few men to look in that direction; but notwithstanding the success that had attended the efforts of the missionary and the few Spanish residents who had made a start in that direction, the gold hunters did not seem to realize any of the capabilities of the soil and climate. I remember that in the fall of 1851 a gentleman from Colusa and told me he thought growing barley for the animals in carrying people and merchandise to the mines would be a business, and he was hunting a place where barley would grow. At Colusa he had to pass over the fertile plains of Butte County, and would have thought a man insane who would have told him that wheat would grow there. With all the broad expanse of the Sacramento Valley before him, he was days and days selecting a place on which to try the experiment of raising barley. And, notwithstanding that wild vegetation grew as no man had seen it before, there was a man who told him his experiment would end only in failure.

The gold hunters found California a stock country. Great herds of cattle roamed over hill and plain, and they were killed for food and tallow, and ships "came around the Horn" to get these commodities for commerce. Meat was in greater demand by the miners than any of the other articles of agriculture, and stock growers soon had possession of the best portions of the country. Flour and such other articles as the people needed could be imported. It became to the interior stock man to argue that the country was fit for stock and for wheat. A man with a wheat field or a garden was looked upon as an enemy. The Spanish grants, held of course in large bodies, were for stock ranges, and the best and most accessible portions of the domain were soon entered up for the same purpose. There were dry seasons and stock died; there came wet seasons and stock died; the country became overstocked, and some people began to believe that wheat could be grown, although many denied it long after it was an established fact.

To grow wheat, however, the fields had to be fenced to keep the stock out. This was too expensive, and the first great fight in the history of agriculture came in the shape of a demand for a law to require for the law requiring every man to take care of his stock. I was told, when advocating such a law, that I would ruin the country by driving all the stock out, but the fight went on until the law was passed. Wheat growing then became and is a great industry. A single acre in California—Colusa—has produced 2 per cent of the wheat of the United States. The wheat growers, succeeding the cattle growers, took possession of all the best land in the State. With large stock raising and is a profitable business. It has been so profitable that men in it are loath to experiment with anything else. The consequence has been that each wheat grower has been striving to enlarge his place and the banner wheat county has had a decrease of agricultural production in the last ten years. As the large wheat farmer bought his neighbor, and shut up school houses, he saw the necessity of doing something in a social way for his family, and he moved to leaving hired men or renters in charge, with no improvement in the orchards, no shade trees, no nothing on the land but a couple of wheels, presided over by a heathen Chinese. The consequence of the banner wheat county, with the best land in the world, in the year 1890, imports vegetables; aye, cabbage and potatoes.

and cheese, and bacon and lard, and the children cry for milk. And yet the possibilities of the soil are unlimited. Let me give you an instance: The census enumerator came to a garden containing eight acres, cultivated by Chinese. He made the boss understand that he was working for the United States, and that he must true answers make pain of something equally horrible as the loss of his queue. The man said he had on his books sales to the amount of \$7,000 in a year, and the smaller sales not noted aggregated perhaps another \$1,000. The water to irrigate was pumped from the river by horse power. The officer asked him how much he could produce on that eight acres if he had water to use at will. "Oh," he said, "\$10,000 easy." I have verified this statement in other instances.

Once upon a time there was a man working a mine for lead, throwing away everything else. He was making money, and was satisfied. Another man came along and showed him that only 20 per cent of his ore was lead, and the rest 80 per cent was silver, and this he was throwing away. "Oh, yes, I know that," he said, "but I am making a good living working the lead; it would take a change to get the silver, and besides if all the silver mines in the world should be worked there would be an overproduction of silver, and it would be worth nothing." The man who has been upon which can be netted from \$100 to \$1,000 per year per acre, and he persists in planting it to a crop where he clears only \$10 every two years, is not unlike that miner. You have all heard them talk about overproduction of every article but wheat. For live stock range, our land is worth from \$1 to \$5 per acre; for wheat, it is worth from \$20 to \$50 per acre; but for those productions in which California excels the world—it cannot be overproduced in this generation or the next—it is worth from \$100 to \$1,000 per acre. The cattle men were driven into wealth by the law that made wheat growing the leading industry; and now they are being driven inch by inch into opulence, by the adoption of the methods that enhance the value of land. They are being forced to work the mine for silver.

The great canal is being forced down through the center of the banner wheat-growing county of the world. Do not understand me as condemning stock and wheat growing. Both are good in their places. Stock raising is good; its mining is nearly always profitable; but the point I want to make is that a mine with ore that contains 20 per cent of lead and 80 per cent of silver should not be worked for the lead exclusively. The men, followed by the wheat men—mostly the same individuals—who took possession of the best part of the State, others were compelled to go out into the desert and put water on it, and at the touch of the water upon the desert, like the touch upon Aladdin's lamp, brought the desert into prosperity; and the world stood astonished. Fresno, the desert, increased in the decade from nine thousand, in round numbers, to one hundred and one thousand, in round numbers; while Colusa, the banner stock county, when stock was the rule, and the banner wheat county since, is the same, that she holds her same thirteen thousand that she had by the year 1880. Other portions of the State are the same way.

Twenty years ago no man would have given the country between Stockton and Galt, squared by the length of the railroad, for all of Colusa County. Too many of your Stockton-Galt people are mining

for the lead, when they have 80—aye, 99—per cent of silver. I saw a more fertile country than that road passes through? I over the State; there is but little of the best land put to value. Some people saw that oranges grew well at Oroville, but the land was held by those who thought that it might be well enough in a desert, but as long as the good land could bring a wheat crop two years, it was good enough for them. The consequence was it was put upon some hard, red land that in the state of nature grow a ton of feed in a century, and magnificent orange groves the consequence. The result of the persistent opposition of the best land of the State is that ten times as much money is made an acre from the desert land and the hard, red land, that we call in a state of nature, as from the good land. In some of the best ties, where land monopoly has from the first been impracticable, the rule does not always obtain.

Some may think that such talk as this is not a boom for California, but if we find as a fact that our poorest land can be made to produce \$100 to \$1,000 per acre per annum, what can our best land do? The wonderful water king touches it with his magic rod? I was at the other day, and visited the Page & Morton orchard and vineyard, eleven hundred acres. This orchard clears this year a quarter of a million dollars. This is enough, one of the proprietors informs me, pay for the land, pay for the ditches, pay for all the improvements, including immense driers, pay for planting and caring for the trees, and vineyard to date; so they have it all, and all they have raised, amounting to many thousands of dollars, clear. With water and an intelligent cultivation this land would have produced about five sacks of wheat to the acre every two years, and have made about enough money to keep a small family constantly on the land, so that to know if the harvest would pay the store bill.

The San Joaquin Valley contains an arable area of about a thousand five hundred square miles. There is not water for all of it, but we may safely say we can irrigate, without great cost, nine hundred square miles, or five million seven hundred and fifty thousand acres. Here is room for seventy-two thousand families, with eighty acres of irrigated land is not too small an average. Here so, it accommodates thirty-six thousand with a quarter section. It is modest to put the gross income of this land at \$50 an acre, which is much less than half what irrigated land has been bringing in the average. This would give the San Joaquin Valley a gross income of \$288,000,000 annually. The half of this spent in the cities and towns in the valley would make what? These may be big figures, but a child is now born who will see the fulfillment of them. What will be by what has been and what is, I am met with the resort of the pessimist—overproduction.

Some nine years ago I took a ride over the Santa Clara orchard with a friend, and was shown a cherry orchard that rented that year for an acre. I went home and was telling some of the silurians about it. "Oh," they said, "that is pretty good, but in four or five years it will be overdone, and he will be glad to sell the fee to him who will plant an orchard for \$100 per acre." Well, the rent has been going up the same orchard, and I don't believe you could rent it next year for an acre.

When we look over some of our large orchards and vineyards we see where the products are to be sold. Then when we go East and see the vast number of people there; when we come to think that we supply sixty-five millions of people with wine, olive oil, olives, lemons, apricots, prunes, peaches, figs, grapes, plums, pears, and a great many other things in which we excel; that we furnish all the fruit to them green, canned, and dried, and the scene of the wonder of these people are increasing almost as fast as we can increase our productions. Then it is a fact well attested that a laborer in California can do more work for the same money here, although the rate of wages is higher, than on any part of the globe. Mr. Irving Scott tells me that this is the reason we can build steel-clad ships cheaper than at the East, although his materials cost more and he pays higher wages. The fact will make us a manufacturing people, and we will grow cotton, sugar, and a hundred other things that will be found profitable in our wonderful climate, so that all this land will not be in fruit. We will have alfalfa fields, and supply the world with cheese cheaper than they can make it in frozen climes. We can produce a pound of meat of any kind for less money than on any other part of the globe, and transportation will soon be so cheap as to annihilate distance. Our beets are so cheap in sugar that we can compete with the world in that staple. With these productions flourishing, with our cities and towns busy with the manufacture of every sort, we will have an immense home market for the products of the soil, and it will require more land than we will want to spare to them to supply the home demand for cereal

When I am speaking myself on another occasion, I claim that agriculture is not the source of wealth—it is wealth. It is a mistake we have fallen into in calling gold wealth. It represents wealth. A man might stand on a pile of gold as high as Shasta and starve to death, but with agricultural productions of a small value he would roll in wealth; that is, he would have plenty, and plenty is wealth. I have thought much on the difference between the productions of the mine and the productions of the farm. Both come out of the ground, both are created, as it were, by labor. Gold is taken out and goes off after the farm products, and does not return. It goes into the circulating current of the world, and has no more value to the State that produces it than to any other. There has never been a district of country inhabited by man since the beginning of the world, where the soil was good, that the people were not rich in all that it produced, and towards making mankind happy and contented, even though they had to use iron or cakes of soap for a circulating medium. Various things have been resorted to for a circulating medium; many things have been made to take the place of gold. In fact, to-day, with our abundance of gold, only about 3 per cent of the business of the country is done with gold or silver. It is done with bits of paper. It is that gold must stand back of this paper. Is that true? I maintain it is agriculture that backs the whole. The piece of paper issued by the Government \$20 is as much \$20 as the gold piece, and in like manner, and back of that paper \$20 is the land, the source of this whole Government, and without that agriculture it is not worth as much as blank paper. All other things, such as soap, and the paper would still be worth the \$20. The circulating medium of a nation, then, is not the wealth of the nation, and must not

be confounded with it. When you go to hunt for the wealth of the land, look at the condition of its agriculture. How much does it produce per capita? Then you have reached its wealth.

Suppose two men are on a raft at sea; one has a bag of gold and the other a bag of biscuit. Which has the wealth? One has the gold, but it is useless as brickbats without something to exchange it for in the market. In the case above there would be no biscuit in the market, and the medium would be worthless. The products of agriculture would never be made worthless. Even in case of overproduction of gold, wealth is there. There is plenty and prosperity in the land, and so much—each one has such an abundance—that there is no exchanging going on.

It is true that labor engaged in other avocations creates a relative wealth. A city may be a manufacturing city, and bring a large amount of the circulating medium, but it has no primary, no independent wealth. It could not live of itself; it could not stand alone. Agriculture can just do that. In the discussion of the hydraulic mining question, I once said that if Mount Shasta was a solid lump of gold, California could not afford to have it rolled from its present site to the bottom of the Sacramento Valley, if it destroyed forever the land over which it should be rolled. This was treated as an extravagant statement, but it is as true as the word of God. Suppose we could roll great mountains of gold over all our agricultural land—destroy the land and ship the gold to the bottom of the sea, what would be left in California, and what would it be? Hence, I say to you that if Mount Shasta were solid gold, the people of California ought to go to war and shed their blood to prevent its removal, which entailed the destruction of the land of the Second Agricultural District.

Now, this is talking about letting the gold go out into the stream of the current of the world. But how much do you suppose the individual California, the political organization of that name, could afford to put into her treasury, per acre, in consideration of having her agricultural lands destroyed—made desert? Your land here will sell for \$100 an acre. Could the State—individual California—afford to have the land destroyed for \$100 per acre paid into the treasury? Could she for \$1,000 an acre? If the money was paid into the treasury, Sacramento and the land all destroyed, what would we do with the money? Divide it up, you say, among the people? Then the land is left, and where would California be?

The statesman does not look out for to-day; that is caring for the future, but he looks out for to-morrow—for the days and days to come, for generations not yet in the womb of time. So looking, could California afford to have one acre around Stockton carpeted with green grass, which would thereby be destroyed? Can she put out too great an acreage to have an acre redeemed from a desert, or made to produce one year where it now produces one in two years?

SOUTHERN PACIFIC RAILROAD FREIGHT TARIFF ON GRAIN.

For Carloads of not less than 20,000 Pounds. Rates are in Cents per 2,000 Pounds.

From.	To Stockton.	From.	To Stockton.
Adelphi	365	Kirkwood	435
Adelphi Creek	365	Corning	445
Adelphi	360	Richfield	450
Adelphi	355	Finnell	450
Adelphi	350	Tehama	450
Adelphi	350		
Adelphi	345	Davis	270
Adelphi	325	Tremont	280
Adelphi	325	Dixon	290
Adelphi	325	Batavia	295
Adelphi	325	Elmira	310
Adelphi	325	Cannons	310
Adelphi	325	Suisun	270
Adelphi	320	Teal	260
Adelphi	315	Goodyears	255
Adelphi	310	Benicia	230
Adelphi	305		
Adelphi	300	Cordelia	300
Adelphi	300	Creston	305
Adelphi	295	Napa Junction	305
Adelphi	295	South Vallejo	305
Adelphi	290	Thompson	305
Adelphi	285	Napa	305
Adelphi	275	Union	305
Adelphi	260	Oak Knoll	305
Adelphi	245	Truebodys	305
Adelphi	225	Yountville	305
Adelphi	220	Oakville	315
Adelphi	215	Rutherford	320
Adelphi	215	Bello	330
Adelphi	215	St. Helena	350
Adelphi	205	Krug	368
Adelphi	205		
Adelphi	205	Barro	375
Adelphi	195	Bale	380
Adelphi	190	Walnut Grove	380
Adelphi		Calistoga	390
Adelphi	185		
Adelphi	175	Brighton	150
Adelphi	160	Florin	135
Adelphi	160	Elk Grove	135
Adelphi	160	McConnells	135
Adelphi	150		
Adelphi		Cicero	210
Adelphi	280	Clay	210
Adelphi	300	Carbondale	210
Adelphi	300	Ione	210
Adelphi	300		
Adelphi		Galt	125
Adelphi	300	Acampo	90
Adelphi	300	Lodi	85
Adelphi	305		
Adelphi	305	Oakdale	145
Adelphi	305	Burnetts	145
Adelphi	305	Clyde	135
Adelphi	315	Trigo	125
Adelphi	320	Farmington	110
Adelphi		Milton	130
Adelphi	345	Waverly	125
Adelphi	345	Peters	95
Adelphi	355	Holden	85
Adelphi	365	Walthal	70
Adelphi	375	Charleston	70
Adelphi	385		
Adelphi	395	Stockton	
Adelphi	415	French Camp	75
Adelphi	415	Lathrop	75
Adelphi	435	San Joaquin River	125

SOUTHERN PACIFIC FREIGHT TARIFF ON GRAIN—Continued.

From.	To Stockton.	From.
Banta	125	Turlock
Tracy	125	Delhi
Melrose	240	Livingston
Mitchell	240	Arena
San Leandro	240	Atwater
Lorenzo	240	Merced
Haywards	240	Athlone
Alvarado Cross Roads	240	Minturn
Decoto	240	Berenda
Niles	240	Madera
		Borden
Washington	260	Sycamore
Warm Springs	264	Fresno
Milpitas	264	Malaga
Wayne	264	Fowler
San José	264	Selma
		Kingsburg
Sunol	240	Traver
Pleasanton	240	Cross Creek
Livermore	240	Goshen
Altamont	200	
Midway	160	Hanford
Ellis	155	Lemoore
		Heinlen
		Huron
Morrano	85	
Ripon	95	
Salida	115	Tagus
Modesto	135	Tulare
Ceres	145	Tipton
Keyes	145	Alila

SAN JOAQUIN AND SIERRA NEVADA RAILROAD.

From.	To Stockton.	From.
Gillispies	95	Woodbridge
Lockeford	120	Boyees
Clements	140	Popes
Wallace	180	Taison
Burson	210	

RAINFALL IN STOCKTON SINCE 1849.

The following table of the rainfall in Stockton since 1849 was prepared from the records kept at the State Insane Asylum, and is arranged according to the seasons, showing the amount in inches for each month, for forty years, to October 1, 1890; also the quantity for every month, and the annual amount of rain:

MONTH.	1849.	1850.	1851.	1852.	1853.	1854.	1855.
January	0.250		1.000	.008			
February	1.500		.180			.130	
March	2.250	spring.	2.140	6.000	.610	.310	.740
April	12.500	spring.	7.070	13.410	1.350	.230	2.420
MONTH.	1856.	1857.	1858.	1859.	1860.	1861.	1862.
January	4.500	.650	.580	2.400	2.640	2.900	4.500
February	0.500	.350	.120	.820	8.940	2.740	.820
March	10.000	1.880	6.400	2.020	5.600	2.200	.260
April	4.250	1.140	.190	2.700	3.240	3.290	.160
May .....	.250	.690	.300	.250	.660		.170
June .....							.100
July							
August							
September							
October	36.000	4.710	17.980	27.403	21.040	11.680	8.370
MONTH.	1856.	1857.	1858.	1859.	1860.	1861.	1862.
January			spring.	.025	.063		
February .....	.450	.655	3.010		.914	spring.	.355
March .....	.830	2.406	.147	6.485	.181	2.170	.005
April	2.900	6.632	4.329	1.834	4.282	8.637	2.327
MONTH.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
January	1.375	2.444	.964	2.310	2.668	15.086	1.733
February	4.801	2.461	3.906	.931	2.920	4.260	2.751
March .....	.675	2.878	1.637	5.110	3.320	2.800	2.360
April	spring.	1.214	.981	2.874	.475	.821	1.693
May	spring.	.203	1.087	2.491	.590	1.808	.355
June .....	.350	.098		.107	.135	.011	
July .....			.080	.549			
August	spring.	spring.				.006	
September							
October	11.081	18.991	16.041	22.716	15.548	35.549	11.579

RAINFALL IN STOCKTON—Continued.

MONTH.	1863.	1864.	1865.	1866.	1867.	1868.
September .....	.003	.004	.080	-----	.080	-----
October	-----	.120	.480	.001	.620	.100
November	1.490	6.718	2.427	2.426	2.160	2.400
December	1.815	7.867	.364	9.511	6.480	3.400
Totals	7.862	22.512	17.924	25.305	20.710	16.200
MONTH.	1864.	1865.	1866.	1867.	1868.	1869.
January	1.077	4.776	7.699	3.440	5.070	4.100
February .....	.180	.712	2.010	7.104	2.280	3.170
March	1.303	.481	2.018	1.010	3.510	2.400
April	1.080	1.370	.476	1.805	.560	1.500
May .....	.742	.460	2.252	.008	-----	.200
June .....	.087	-----	.100	-----	-----	-----
July	-----	.004	.018	-----	-----	-----
August .....	.085	-----	-----	-----	-----	-----
Totals	7.862	22.512	17.924	25.305	20.710	16.200
MONTH.	1870.	1871.	1872.	1873.	1874.	1875.
September	-----	-----	-----	-----	.230	-----
October .....	.150	.140	.090	.310	1.090	.000
November .....	.670	1.090	1.370	.760	3.450	5.300
December	1.350	11.490	6.250	3.940	.230	2.600
Totals	6.730	20.800	13.300	15.200	11.140	13.300
MONTH.	1871.	1872.	1873.	1874.	1875.	1876.
January	1.470	2.580	.750	3.940	4.540	3.300
February	1.700	3.460	3.970	1.780	.290	2.600
March .....	.300	1.430	.470	3.330	.870	3.300
April .....	.690	.510	.439	.560	-----	.400
May .....	.400	.060	-----	.580	-----	-----
June	sprin.	.040	-----	-----	.450	-----
July	sprin.	-----	.030	-----	-----	.070
August	-----	-----	-----	-----	-----	-----
Totals	6.730	20.800	13.300	15.200	11.140	13.300
MONTH.	1877.	1878.	1879.	1880.	1881.	1882.
September	-----	-----	-----	-----	.003	.500
October .....	.360	.340	.580	-----	.240	1.200
November .....	.720	.510	2.050	.045	.730	1.110
December	1.310	.420	1.670	7.090	1.650	.300
Totals	6.730	20.800	13.300	15.200	11.140	13.300
MONTH.	1878.	1879.	1880.	1881.	1882.	1883.
January	5.450	2.280	1.540	2.830	1.270	2.500
February	6.700	2.940	1.320	2.500	.840	2.500
March	2.560	2.060	.890	.820	3.640	1.200
April	1.010	1.750	6.280	1.110	2.210	4.000
May .....	.650	.960	1.010	.290	-----	-----
June	-----	.200	-----	-----	.110	-----
July	-----	-----	-----	-----	-----	-----
August	-----	-----	-----	-----	-----	-----
Totals	18.760	11.460	15.340	14.685	10.693	15.200

RAINFALL IN STOCKTON—Continued.

MONTH.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
September .....	.190	-----	-----	.27	.88	-----	.57
October	1.400	-----	.22	-----	-----	3.39	-----
November	-----	6.080	.84	.52	2.70	3.27	-----
December	5.690	1.240	.82	3.06	2.42	6.60	-----
Totals	9.620	17.360	7.83	10.81	12.99	-----	-----
MONTH.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
January	1.230	5.360	.36	3.36	.31	4.99	-----
February	-----	.040	3.78	.48	.98	1.66	-----
March .....	.260	1.210	.21	2.29	3.98	1.26	-----
April .....	.770	3.430	1.57	.28	.14	1.08	-----
May	-----	-----	.03	.55	1.52	.55	-----
June .....	.050	-----	-----	-----	.06	-----	-----
July .....	.030	-----	-----	-----	-----	-----	-----
August	-----	-----	-----	-----	-----	-----	-----
Totals	9.620	17.360	7.83	10.81	12.99	-----	-----

STOCKTON FREE PUBLIC LIBRARY

By W. F. CLOUDSLEY, Librarian.

This institution is one that appears to be very popular and the hearts of the citizens of Stockton, judging by its rapid growth, the cheerfulness with which the authorities make the necessary appropriations for its maintenance.

Although it has been under the management of the different parties in power, it has not suffered thereby, for the reason that every party has offered its best material for Trustees.

The changes made in the Board of Trustees has, consequently, a more diversified collection of books than would be found in a library where the Trustees were continued in office.

To-day the library is housed in a home of its own, a fine two-story brick building, costing in excess of \$12,000, built through the munificence of Frank Stewart, who left a legacy of \$5,000 for this purpose, and the liberality of the city authorities on the part of the city of Stockton.

A short history of the organization of this library, and its growth since, we believe would be of some interest to the public generally, and we will attempt to give, as shown by the records on file and the papers published at the time.

After several attempts were made to organize a library of the city (the principal of which was one by the "Philomathian" Society and one by the "Blue Ribbon" Society in 1878, both of which failed), the Mayor of the city, G. C. Hyatt, in March, 1880, called a meeting for this especial purpose, at which N. M. Orr was president, and D. L. Campbell Secretary. Speeches were made by J. D. Paterson and Wm. F. Freeman favoring a tax levy, the latter named gentlemen concurring: J. D. Peters, D. L. Campbell, Dr. Hudson, Wm. Baggs, B. F. Bagley, S. L. Carter, H. W. Taylor, W. W. Cowell. The action taken at this meeting pleased the public generally, and at a meeting of the City Council held on the 11th of April, 1880, Councilmen D. J. Oullahan and Dr. C. L. Ruggles favoring the movement, a levy of a tax of five mills was authorized to establish a Library Fund, under a law passed by the Legislature for the establishment of free libraries and reading-rooms.

The first Board of Trustees (elected in 1880) under this law were Wm. Baggs, A. W. Simpson, J. R. Wilbur, Dr. E. A. Stockton, and Dorrance.

The second (elected May, 1881) were H. T. Dorrance, Dr. G. H. Hewlett, A. V. R. Paterson, F. H. Smith, and Charles Belding.

The third (elected May, 1882) were J. M. La Rue, H. J. Hug, Boirellier, Wm. M. Hickman, and Dr. S. N. Cross.

The fourth (elected May, 1883) were J. M. La Rue, Rev. E. J. S. Reamy, O. E. Badgley, and Dr. W. A. Long.

The fifth (elected May, 1884) were Dr. Thos. Phillips, H. S. Sargent, H. Hewlett, C. Perkins, and Geo. Goodell.

The sixth Board was appointed in December, 1884, by the City Council under the city's new charter, to serve two years, and were S. Gower, Geo. Goodell, Rev. E. H. Ward, W. H. Weaver, and Chas. Belding.

The seventh Board (appointed in 1886) were S. Gower, J. H. Budd, Chas. Belding, J. E. Richardson (who resigned and was succeeded by K. Hook), and Thos. Walsh.

The eighth Board (appointed in 1888) were S. Gower, Jas. H. Budd, Chas. Walsh, Dr. S. P. Crawford, since deceased and succeeded by F. H. Smith, and G. Gumpertz—this last named Board being now in office.

The Librarians were:

January 9, 1880, to September 5, 1882.....	E. A. Johnson.
September 5, 1882, to November 25, 1882.....	H. R. Campbell.
November 25, 1882, to December 26, 1884.....	W. F. Cloudsley.
December 26, 1884, to February 3, 1886.....	M. M. Nichols.
February 3, 1886, to February 2, 1886.....	V. P. Prichard.
February, 1886, to December 6, 1887.....	Miss Julia Minta.
December, 1887, until the present time.....	W. F. Cloudsley.

The following table will give some idea of the number of books loaned each year:

Year.....	Romance.....	Juvenile.....	Room Reading.....	History and Biography.....	Miscellaneous.....	Voyage and Travel.....	Science.....	Poetry and Drama.....	Total.....
1880.....	20,398	6,498	2,235	1,324	2,528	859	520	817	16,122
1881.....	22,836	7,208	2,358	1,339	3,540	742	314	437	29,487
1882.....	21,469	6,831	3,367	1,556	3,723	834	393	466	34,674
1883.....	18,568	7,067	2,738	1,122	3,331	655	663	430	33,774
1884.....	18,608	7,421	2,808	1,101	2,890	512	676	426	38,439
1885.....	21,631	8,732	2,336	892	3,443	596	623	404	34,598
1886.....	25,487	10,063	3,060	1,199	5,167	952	346	481	34,442
1887.....									38,657
1888.....									46,755

The number of volumes in library June 1, 1890, and their classification, is as follows:

Encyclopedias, dictionaries, and books of reference.....	253
Periodicals and magazines.....	1,009
General.....	105
General.....	32
Literary.....	62
Medical.....	32
Natural.....	25
Philosophical.....	37
Religious and Pastoral.....	54
Societies and Missions.....	14
Historical.....	36
Political.....	36
Economic.....	75
General.....	18
Science.....	11
Political Science.....	27
Political Economy.....	51
Administration.....	25
Legislation and Institutions.....	8

Sociology—Education
Commerce and Communication
Costumes and Customs
Philology
Natural Science—General
Mathematics
Astronomy
Physics
Chemistry
Geology
Biology
Botany
Zoology
Useful Arts
Fine Arts
Literature—Miscellaneous (Myers donation)
Juvenile
Poetry and Drama
Romance
Essays
Miscellaneous (English)
German (original)
French (original)
Italian (original)
Spanish (original)
Latin (original) and translations
Greek (original) and translations
History—General
Geography, descriptive, voyage, and travel
Biography
Ancient
Europe
Asia
Africa
America
United States Public Documents
Books not yet classified
Pamphlets
Total

There are in the reading-room, continuously, magazines and paid for, 76; donated, 34.

From the Secretary's financial report made June 1, 1890, we approximate value of library property to be:

Library building and improvements
Library lots, valued at
Books, for which have been paid
Furniture
Three thousand five hundred books that have been donated
Balance in City Treasury
Balance in Library
Total

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—THOROUGHBREDS—STALLIONS.			
Acad, four years old.	Matt. Storn	Sacramento	\$25 00
CLASS II—DISTRICT TROTTING (STANDARD BREED) STALLIONS.			
Acad, four years old.	W. H. Parker	Stockton	\$25 00
Acad, two years old.	L. U. Shippee	Stockton	\$10 00
Acad, one year old.	Mrs. M. E. Warren	Linden	B. & S.
MARES.			
Acad, two years old.	Funck Bros.	Farmington	\$10 00
CLASS III—ROADSTERS—STALLIONS.			
Acad, four years old.	N. Nevin	Stockton	\$25 00
Acad, four years old.	R. E. Stowe	Stockton	\$8 00
Acad, three years old.	O. P. Munson	Turlock	\$15 00
Acad, three years old.	Chris. Heid	Campo Seco	"Indep."
Acad, two years old.	Geo. Kneier	Stockton	\$10 00
Acad, two years old.	Chas. Garrow	Stockton	\$3 00
Acad, one year old.	S. Lombard	Stockton	B. & S.
MARES OR GELDINGS.			
Acad, four years old.	J. S. Dunham	Stockton	\$15 00
Acad, five years old.	D. Leiginger	Stockton	"Mail."
Acad, three years old.	O. P. Munson	Turlock	\$10 00
Acad, three years old.	S. Lombard	Stockton	\$3 00
Acad, two years old.	Mrs. M. B. Tam	Stockton	\$7 50
Acad, one year old.	N. Nevin	Stockton	\$5 00
Acad, one year old.	Morris & Belden	Stockton	\$2 00
Acad, under one year.	Joshua Cowell	Stockton	\$3 00
CLASS IV—HORSES FOR ALL PURPOSES—STALLIONS.			
Acad, four years old.	Joshua Cowell	Stockton	\$25 00
Acad, three years old.	S. W. Boyce	Lathrop	\$8 00
Acad, four years old.	Alex. Gross	Stockton	Sp. \$8 00
Acad, three years old.	G. H. Shedd	Lathrop	Sp. \$10 00
Acad, two years old.	J. N. Soloman	French Camp	\$15 00
Acad, yearling colt.	Joshua Cowell	Stockton	\$3 00
CLASS V—DRAFT HORSES—STALLIONS.			
Acad, three years old.	C. E. Barnhart	Stockton	\$25 00
Acad, five years old.	W. L. Overhiser	Stockton	\$8 00
Acad, one year old.	C. P. Allison	Lodi	\$9 00
MARES OR GELDINGS.			
Acad, three years old.	C. E. Barnhart	Stockton	\$10 00
Acad, three years old.	Joshua Cowell	Stockton	\$4 00
Acad, yearling filly.	C. P. Allison	Lodi	\$2 00
CLASS VI—CARRIAGE ANIMALS (DISTRICT).			
Acad, Dan	L. U. Shippee	Stockton	\$20 00
Acad, Queen	J. S. Dunham	Stockton	\$6 00
Acad, single carriage animal	L. U. Shippee	Stockton	\$7 50
CLASS VII—MULES.			
Acad, mules	Joshua Cowell	Stockton	\$15 00
Acad, mules	C. E. Barnhart	Stockton	"Mail."

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS VIII—JACKS AND JENNIES—JACKS.		
Tommy, five years old.....	L. U. Shippee.....	Stockton
Goliah, two years old.....	L. U. Shippee.....	Stockton
—, two years old.....	C. C. Easton.....	Newman
Maltese, one year old.....	L. U. Shippee.....	Stockton
—, one year old.....	C. C. Easton.....	Newman
Juno, under one year.....	L. U. Shippee.....	Stockton
JENNIES.		
Lummix, eight years old.....	L. U. Shippee.....	Stockton
—, two years old.....	J. B. Crow.....	Crow's Landing
2d Kate, two years old.....	C. C. Easton.....	Newman
Susie, one year old.....	L. U. Shippee.....	Stockton
—, suckling colt.....	L. U. Shippee.....	Stockton
CLASS XI—DURHAMS—BULLS.		
Red Prince 3d, two years old.....	L. U. Shippee.....	Stockton
1st Lord of the Valley, under one year.....	L. U. Shippee.....	Stockton
COWS.		
Miss Townsley, three years old.....	L. U. Shippee.....	Stockton
Red Rose, two years old.....	L. U. Shippee.....	Stockton
Rose Eyre, under one year.....	L. U. Shippee.....	Stockton
CLASS XIII—HOLSTEINS—BULLS.		
Stockton (7085), three years old.....	E. S. Beecher.....	Stockton
Apollo Belvidere (14149), one year old.....	E. S. Beecher.....	Stockton
O'Neill, under one year.....	E. S. Beecher.....	Stockton
COWS.		
Princess Tryntje, three years old.....	E. S. Beecher.....	Stockton
Lady St. Clair, one year old.....	E. S. Beecher.....	Stockton
CLASS XVI—HERDS OF CATTLE.		
Durham herd.....	L. U. Shippee.....	Stockton
Holstein herd.....	E. S. Beecher.....	Stockton
CLASS XIX—SWINE—ESSEX AND BERKSHIRE.		
Best boar.....	L. U. Shippee.....	Stockton
CLASS XX—POULTRY.		
Best pair Bantams.....	D. Hewlett.....	Stockton
Second best.....	William Hickox.....	Stockton
Best pair Leghorns.....	W. A. French.....	Stockton
Second best.....	William Hickox.....	Stockton
Best pair Cochins.....	William Hickox.....	Stockton
Best pair Brahmas.....	William Hickox.....	Stockton
Best pair Plymouth Rocks.....	William Hickox.....	Stockton
One breeding pen of Brown Leghorns.....	W. A. French.....	Stockton
One pair of Black Minorcas.....	W. A. French.....	Stockton
Best pair turkeys.....	W. A. French.....	Stockton
Breeding pen of Guinea fowls.....	W. A. French.....	Stockton

SECOND DEPARTMENT—PARK.

Exhibit.	Exhibitor.	Address.
CLASS I—AGRICULTURAL IMPLEMENTS.		
Best combined harvester.....	S. C. H. & A. Works.....	Stockton
Second best.....	Houser, Haines & Knight.....	Stockton
Best header.....	S. C. H. & A. Works.....	Stockton
Second best.....	Matteson & William-son Mfg. Co.....	Stockton

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
combined horse-power.....	Matteson & William-son Mfg. Co.....	Stockton	\$5 00
combined clod crusher, harrow, roller, and leveler.....	S. C. H. & A. Works.....	Stockton	\$5 00
—, best.....	Grangers Union.....	Stockton	Sp. \$3 00
—, grain cleaning attachment for.....	S. C. H. & A. Works.....	Stockton	\$3 00
—, harrow (independent).....	S. C. H. & A. Works.....	Stockton	\$2 00
—, harrow.....	Matteson & William-son Mfg. Co.....	Stockton	\$3 00
—, hay press.....	S. C. H. & A. Works.....	Stockton	\$5 00
—, and scraper.....	Grangers Union.....	Stockton	\$3 00
—, best.....	S. C. H. & A. Works.....	Stockton	Sp. Dip.
—, harrow.....	Matteson & William-son Mfg. Co.....	Stockton	Sp. men.
—, display of agricultural imple-ments by any one house, California.....	Matteson & William-son Mfg. Co.....	Stockton	\$20 00
—, mowing machine.....	H. C. Shaw.....	Stockton	\$5 00
—, best.....	John Caine.....	Stockton	Sp. men.
—, plow for all purposes.....	Grangers Union.....	Stockton	\$3 00
—, best.....	John Caine.....	Stockton	Sp. men.
—, single plow.....	John Caine.....	Stockton	\$3 00
—, double plow.....	Matteson & William-son Mfg. Co.....	Stockton	\$3 00
—, best.....	Grangers Union.....	Stockton	Sp. men.
—, and plow.....	Matteson & William-son Mfg. Co.....	Stockton	\$3 00
—, best.....	Grangers Union.....	Stockton	Sp. men.
—, cleaning mill.....	Grangers Union.....	Stockton	\$3 00
—, best.....	S. C. H. & A. Works.....	Stockton	Sp. men.
—, grain sower.....	Grangers Union.....	Stockton	\$2 00
—, cultivator.....	Grangers Union.....	Stockton	\$3 00
—, best.....	Matteson & William-son Mfg. Co.....	Stockton	Sp. men.
—, harrow fork.....	William Daley.....	Sacramento	Diploma.
—, farm wagon for general purposes.....	Matteson & William-son Mfg. Co.....	Stockton	\$3 00
—, best.....	Henderson & Son.....	Stockton	"Mail."
CLASS II—PUMPS.			
—, pump.....	John Jackson.....	Stockton	\$3 00
—, pump.....	John Jackson.....	Stockton	\$3 00
—, pump.....	D. C. Crummy.....	Los Gatos	Sp. men.
CLASS III—STOVES AND LAMPS.			
—, manufactured gas stoves.....	Henry Adams.....	Stockton	\$5 00
—, natural gas stoves.....	F. A. Rubl.....	Stockton	\$5 00
—, gas stoves*.....	John Jackson.....	Stockton	Sp. men.
—, gas stoves, variety considered.....	Henry Adams.....	Stockton	\$7 50
—, natural gas lamps.....	Henry Adams.....	Stockton	\$10 00
—, display of lamps.....	Henry Adams.....	Stockton	\$4 00
CLASS IV—TOOLS AND HOUSEHOLD IM-LEMENTS.			
—, harrow.....	Grangers Union.....	Stockton	\$2 00
—, mowing machine.....	Grangers Union.....	Stockton	\$2 00
—, clothes wringer.....	Grangers Union.....	Stockton	\$1 00
—, harrow.....	Matteson & William-son Mfg. Co.....	Stockton	\$2 00
—, best.....	Matteson & William-son Mfg. Co.....	Stockton	\$2 00
CLASS V—VEHICLES.			
—, largest display of vehicles.....	Henderson & Son.....	Stockton	\$10 00
—, best.....	Grangers Union.....	Stockton	Diploma.
—, for all purposes.....	Henderson & Son.....	Stockton	\$3 00
—, heavy carriage.....	Henderson & Son.....	Stockton	"Mail."

Special mention for John Caine's display.

We recommend special mention for natural gas stoves, exhibited by John Jackson, as they were not entered for competition.

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Family carriage	Grangers Union	Stockton
Best top buggy	Henderson & Son	Stockton
Top buggy	Grangers Union	Stockton
Best surrey	Henderson & Son	Stockton
Surrey	Grangers Union	Stockton
Best open buggy	Henderson & Son	Stockton
Best two-seated open wagon	Henderson & Son	Stockton
Best trotting wagon	Grangers Union	Stockton
Trotting wagon	Henderson & Son	Stockton
Best spring market wagon	Henderson & Son	Stockton
Best track sulky	Henderson & Son	Stockton
Best ladies' phaeton	Grangers Union	Stockton
Ladies' phaeton	Henderson & Son	Stockton
Best doctor's phaeton	Grangers Union	Stockton
Doctor's phaeton	Henderson & Son	Stockton
Best phaeton for all purposes	Henderson & Son	Stockton
Phaeton for all purposes	Grangers Union	Stockton
Best wagon or carriage brake	Henderson & Son	Stockton
Best carriage springs	Henderson & Son	Stockton
Best buckboard	Henderson & Son	Stockton
Best display of carriage materials, wheels, and trimmings	Henderson & Son	Stockton
Best display of vehicles named in this class, manufactured in California, variety considered, only one vehicle of a kind to be admitted in display	Henderson & Son	Stockton
Best street car	S. C. H. & A. Works	Stockton
Best omnibus, two or four horses	Henderson & Son	Stockton
CLASS VI—BUILDING MATERIAL.		
Best slate	Burton La Rue	Stockton
Best sandstone	Burton La Rue	Stockton
Best building material	Burton La Rue	Stockton

The committee recommend that H. C. Shaw have special mention on Exhibits 585, 586, 587, 588, and 589. The display was not entered for competition.

THIRD DEPARTMENT—PAVILION.

Exhibit.	Exhibitor.	Address.
CLASS I—FARM PRODUCTS RAISED IN THE DISTRICT.		
Best fifty pounds corn	Fred. Arnold	Stockton
CLASS II—CULTIVATED NUTS.		
Best five pounds English walnuts, raised by exhibitor	Asa Collins	Knights Ferry
Best five pounds soft-shell almonds, raised by exhibitor	Asa Collins	Knights Ferry
Second best	Mrs. Joseph Hale	Stockton
Best twenty-five pounds mixed nuts	Asa Collins	Knights Ferry
CLASS III—GRAINS AND GRASSES.		
For the best and most artistically arranged display of California grains and grasses	Mrs. Joseph Hale	Stockton
Second best	Mrs. R. W. Miller	Stockton
CLASS IV—WINES AND BRANDIES.		
Best grape brandy, one year old	Buhach P. & M. Co.	Merced County
DRY WINES.		
Best white wine, not less than one dozen bottles	Buhach P. & M. Co.	Merced County
Best claret wine, not less than one year old, and not less than one dozen bottles	Buhach P. & M. Co.	Merced County

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
SWEET WINE.			
Best wine, not less than one dozen bottles	Buhach P. & M. Co.	Merced County	"Indep."
HORTICULTURAL DEPARTMENT.			
Best and best collection of apples	L. U. Shippee	Stockton	\$10 00
Five varieties or over of apples	L. U. Shippee	Stockton	Am. Ag.
Best and best display of oranges	Kaspar Vogt	Knights Ferry	Gold
Four varieties oranges, five of each	Kaspar Vogt	Knights Ferry	medal
Best and best display of lemons	Kaspar Vogt	Knights Ferry	and \$45.
Four varieties lemons, five of each	Kaspar Vogt	Knights Ferry	
Collection of grapes	Buhach P. & M. Co.	Merced County	\$10 00
Best	Mrs. D. A. Learned	Stockton	"Indep."
Three varieties grapes	Buhach P. & M. Co.	Merced County	\$3 00
Best	Mrs. D. A. Learned	Stockton	Sp. men.
Single variety table grapes	Mrs. D. A. Learned	Stockton	\$3 00
Single variety wine grapes	Mrs. D. A. Learned	Stockton	\$3 00
Best bunches raisin grapes	Mrs. D. A. Learned	Stockton	\$5 00
Collection of figs	Walter Yost	Stockton	\$3 00
Six specimens figs	Asa Collins	Knights Ferry	\$2 00
Best	Willie Hickox	Stockton	\$1 00
Best and best collection of pears	L. U. Shippee	Stockton	\$8 00
Twelve specimens pears	L. U. Shippee	Stockton	Am. Ag.
Best and best collection of peaches	B. F. Langford	Lodi	\$5 00
Twelve specimens of any variety	Mrs. Jos. Hale	Stockton	\$2 00
Best	Buhach P. & M. Co.	Merced County	\$3 00
Twelve specimens quinces	Walton Rhodes	Stockton	\$2 50
Collection of pomegranates	Mrs. W. H. Buttrick	French Camp	\$3 00
Exhibit of olives	Mrs. W. H. Buttrick	French Camp	\$1 50
VII—DRIED FRUITS, CURED BY THE EXHIBITOR.			
Best	B. F. Langford	Lodi	\$3 00
Best	Mrs. Jos. Hale	Stockton	Sp. men.
Best	Buhach P. & M. Co.	Merced County	\$3 00
Best	Asa Collins	Knights Ferry	\$3 00
Best	Mrs. Jos. Hale	Stockton	Sp. men.
Best	Mrs. Jos. Hale	Stockton	\$2 00
Best	Mrs. Jos. Hale	Stockton	\$2 00
Best	B. F. Langford	Lodi	\$2 00
Best	Buhach P. & M. Co.	Merced County	Diploma.
Best	Mrs. Jos. Hale	Stockton	Sp. men.
Best	Mrs. Jos. Hale	Stockton	\$2 00
Best	Buhach P. & M. Co.	Merced County	\$2 00
Best	Mrs. Jos. Hale	Stockton	\$2 00
Best	Mrs. Jos. Hale	Stockton	\$2 00
VIII—PRESERVES, JELLIES, AND CANNED FRUITS.			
Exhibit of fruits preserved in jars, not less than five varieties, not less than one pint each	Mrs. Jos. Hale	Stockton	\$5 00
Best	Mrs. J. C. Reid	Stockton	\$3 50
Exhibit of fruits preserved in jars, not less than five varieties, and not less than one quart each	Mrs. Jos. Hale	Stockton	\$5 00
Best	Mrs. J. C. Reid	Stockton	\$3 50
Exhibit of jellies, five varieties or more	Mrs. J. C. Reid	Stockton	\$7 50
Best	Mrs. Jos. Hale	Stockton	\$5 00
Best	Mrs. John Wilson	Stockton	Sp. Dip.
Exhibit of fruits, put up by exhibitor	Asa Collins	Knights Ferry	*\$35 00
Exhibit of pickles, of all kinds, put up by the exhibitor	Mrs. Jos. Hale	Stockton	\$5 00

The committee recommend that Mr. Asa Collins be awarded a Gold Medal for the largest and best display of dried fruits.

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best assortment of crystallized fruit, put up by the exhibitor.	Mrs. Jos. Hale	Stockton
Best assortment of tomato catsup, put up by the exhibitor.	Mrs. Jos. Hale	Stockton
CLASS IX—CULINARY.		
Best steamed brown bread	Mrs. Jos. Hale	Stockton
Steamed brown bread	Miss Laura Bowley	Stockton
Best white bread	Miss Frankie Cowell	Stockton
Best graham bread	Mrs. Jos. Hale	Stockton
Best ginger bread	Mrs. Jos. Hale	Stockton
Best corn bread	Mrs. Jos. Hale	Stockton
Best plate biscuit	Mrs. H. E. Williamson	Stockton
Plate biscuit	Mrs. W. H. Keep	Stockton
Best fruit cake*	Mrs. H. E. Williamson	Stockton
Best fruit cake*	Mrs. J. C. Reed	Stockton
Best pound cake	Mrs. H. E. Williamson	Stockton
Best sponge cake	Mrs. M. Severy	Stockton
Best coffee cake	Mrs. J. C. Reed	Stockton
Best jelly cake	Miss Katie Fennel	Stockton
Best chocolate cake	Mrs. H. E. Williamson	Stockton
Best nut cake	Mrs. H. E. Williamson	Stockton
Best cocoanut cake	Mrs. H. E. Williamson	Stockton
Best doughnuts	Mrs. Jos. Hale	Stockton
CLASS X—FLORAL.		
Largest collection of flowering plants in bloom	Mrs. E. C. Clowes	Stockton
Best collection of ornamental foliage plants	R. P. Bates	Stockton
Best collection of new and rare plants	R. P. Bates	Stockton
Best display of cut flowers, to be kept fresh during the fair by replacing	Mrs. E. C. Clowes	Stockton
Best display of white roses, not less than one hundred (exhibition to be made on Saturday, October 4, 1890)	Mrs. E. C. Clowes	Stockton
Display of white roses, not less than one hundred (exhibition to be made on Saturday, October 4, 1890)	R. P. Bates	Stockton
Best display of bouquets	R. P. Bates	Stockton
Best collection of plants suitable for house culture	Mrs. E. C. Clowes	Stockton
Best collection of ferns	R. P. Bates	Stockton
Best ten hanging baskets containing plants	Mrs. E. C. Clowes	Stockton
Best display of growing ornamental grasses	Mrs. E. C. Clowes	Stockton
Best and largest display, either trees or plants, or both	Mrs. E. C. Clowes	Stockton
SPECIAL FOR WEDNESDAY.		
Best and largest display of floral pieces, not less than six pieces	Mrs. E. C. Clowes	Stockton
Best single floral piece	Mrs. E. C. Clowes	Stockton
Best lasting floral piece	Mrs. M. Severy	Stockton
SPECIAL FOR SATURDAY.		
Best display of not less than six pieces	Mrs. I. C. Brandt	Stockton
Display of not less than six pieces	R. P. Bates	Stockton
Display of not less than six pieces	Mrs. M. Severy	Stockton
Best single floral piece	R. P. Bates	Stockton

* Committee recommended a division of premium for fruit cake.

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
MUSICAL SPECIALS.			
Vocal music	Master F. Dailey	Oakdale	Diploma.
Instrumental music	St. Mary's College	Stockton	Diploma.
Monday Evening, September 29, 1890.			
Piano solo by a pupil under four years of age	Miss Hattie Jarvis	Stockton	\$7 00
Best	Miss Sadie Badgley	Stockton	\$3 00
Piano solo by a lady	Miss Blume	Stockton	\$10 00
Best	Miss Ada Wheaton	Stockton	\$3 00
Tuesday, September 30, 1890.			
Chorus of sixteen (two numbers)*	Harmonic Society	Stockton	\$14 00
Chorus of sixteen (two numbers)*	Turn Verein	Stockton	\$14 00
Thursday, October 2, 1890.			
Best	Miss Addie Pusey	Stockton	\$2 50
Best	Mrs. George Fox	Stockton	\$2 50
DANCING SPECIALS.			
Friday, September 29, to Saturday, October 4, 1890, respectively.			
Dancers (lady and gentleman)	Mr. and Mrs. L. W. Robbins	Stockton	\$5 00
Dancers (lady and gentleman)	Sam Wheeler and Miss Kitty Chalmers	Stockton	\$5 00
Dancers (lady and gentleman)	Mr. and Mrs. T. W. Hummel	Stockton	\$5 00
Dancers (lady and gentleman)	Mr. O. S. Fyfe and Miss Marcellene Gage	Stockton	\$5 00
Dancers (lady and gentleman)	Mr. John McCann and Miss Maggie McCann	Stockton	\$5 00
Dancers (lady and gentleman)	Will H. Bennett and Miss Birdie Daggett	Stockton	\$5 00

Special mention of bell, fairy flowers of milkweed, and two wheat pieces. Committee recommended special mention of emblematical floral piece. Committee divided the premium between the competitors.

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
PAINTING IN OIL AND DRAWING.			
Specimen of animal painting	L. U. Shippee	Stockton	\$3 00
Specimen of figure painting	Mrs. Frank Dunlap	Stockton	\$3 00
Specimen of flower painting	Miss Hartie Keep	Stockton	\$3 00
Specimen of flower painting	Mrs. Ada H. Lyons	Stockton	Sp. men.
Specimen of fruit painting	Miss Hattie Keep	Stockton	\$3 00
Specimen of fruit painting	Mrs. G. A. Atherton	Stockton	Sp. men.
Specimen of fruit painting	Mrs. Frank Dunlap	Stockton	Sp. men.
Specimen of landscape painting	Mrs. G. A. Atherton	Stockton	\$3 00
Specimen of landscape painting	Mrs. Frank Dunlap	Stockton	Sp. men.
Specimen of marine painting	Mrs. G. A. Atherton	Stockton	\$3 00
Specimen of marine painting	Mrs. Ada H. Lyons	Stockton	Sp. men.
Specimen of portrait painting	J. Swinerton	Stockton	\$3 00
Specimen of white and black	Mrs. G. A. Atherton	Stockton	\$5 00
Specimen of white and black painting	Mrs. Ada H. Lyons	Stockton	Sp. men.
Specimen of flower painting	Mrs. Frank Dunlap	Stockton	\$3 50
Specimen of fruit painting	Mrs. Frank Dunlap	Stockton	\$5 00
Specimen of landscape painting	Mrs. Ada H. Lyons	Stockton	\$5 00

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best display of marine painting.....	Mrs. Ada H. Lyons.	Stockton
Best display of plaque painting.....	Mrs. A. Schirmer...	Sacramento
Best display of plaque painting.....	Mrs. Frank Dunlap..	Stockton
Display of plaque painting.....	Mrs. Ada H. Lyons..	Stockton
Best display of white and black painting.....	Mrs. Ada H. Lyons..	Stockton
Paintings.....	Norton Bush.....	San Francisco
IN WATER COLORS.		
Best specimen of landscape painting.....	Miss N. Littlehale..	Stockton
Specimen of landscape painting.....	Miss Stella Austin..	Stockton
Best specimen of marine painting.....	Miss Stella Austin..	Stockton
Specimen of marine painting.....	St. Mary's College..	Stockton
Best display of landscape painting.....	Miss N. Littlehale..	Stockton
Display of landscape painting.....	Miss Stella Austin..	Stockton
Display of portrait painting.....	Mrs. W. B. Jenks..	Stockton
DRAWING.		
Best pencil drawing.....	Constance Arnold..	Stockton
Pencil drawing.....	St. Mary's College..	Stockton
Best crayon drawing (not solar print).....	Constance Arnold..	Stockton
Best pen drawings.....	Miss N. Littlehale..	Stockton
Pen drawings.....	Constance Arnold..	Stockton
CLASS II—ORNAMENTAL PAINTING.		
Best luster painting.....	Mrs. Frank Dunlap..	Stockton
Best painting on china.....	Miss Hattie Keep..	Stockton
Painting on china.....	Mrs. J. M. Dormer..	Stockton
Best painting on silk.....	Mrs. Frank Dunlap..	Stockton
Second best.....	Miss N. Littlehale..	Stockton
Painting on silk.....	Mrs. J. M. Dormer..	Stockton
Best painting on bolting cloth.....	Miss N. Littlehale..	Stockton
Second best.....	Mrs. Frank Dunlap..	Stockton
Best painting on satin.....	Miss N. Littlehale..	Stockton
Painting on satin.....	Ida H. Castle.....	Stockton
Best panel painting.....	Miss N. Littlehale..	Stockton
Best painting on chamois.....	Miss N. Littlehale..	Stockton
Best painted tile.....	Mrs. Ada H. Lyons..	Stockton
Painted tile.....	Mrs. G. A. Atherton..	Stockton
Best painting on velvet.....	Mrs. Frank Dunlap..	Stockton
Painting on velvet.....	R. H. Miller.....	Stockton
Best collection of ornamental painting by any one person, variety considered.....	Miss N. Littlehale..	Stockton
Second best.....	Mrs. Ada H. Lyons..	Stockton
Collection of ornamental painting by any one person, variety considered.....	Mrs. Frank Dunlap..	Stockton
CLASS III—SPECIAL PREMIUM TO ENCOURAGE PRODUCTION OF SILK.		
Best display of silk cocoons.....	Mrs. J. D. Utt.....	Stockton
Second best.....	Mrs. J. C. Reid.....	Stockton
Best display of reeled silk.....	Mrs. J. D. Utt.....	Stockton
Display of reeled silk.....	Mrs. J. C. Reid.....	Stockton
CLASS IV—EMBROIDERY.		
Best embroidery (raised).....	Mrs. J. C. McCall..	Stockton
Second best.....	Miss Bassie Gall..	Stockton
Embroidery (raised).....	Miss Nellie Fawcett..	Stockton
Best embroidery, silk on flannel.....	Miss E. H. Waters..	Stockton
Best embroidery, kensington in crewel or wool.....	Miss Hickman.....	Stockton
Best embroidery, kensington in silk.....	Mrs. J. M. Dormer..	Stockton
Second best.....	Miss E. H. Waters..	Stockton
Best embroidery in arrasene.....	Miss Hickman.....	Stockton
Second best.....	Mrs. J. C. McCall..	Stockton
Best embroidery in chenille.....	Miss Hickman.....	Stockton
Second best.....	Mrs. Frank Dunlap..	Stockton
Best embroidery, ribbon.....	Mrs. J. F. Adams..	Stockton
Best embroidery, cotton.....	Mrs. J. F. Adams..	Stockton
Second best.....	Mrs. Mary Pennell..	Stockton

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
embroidery, couching.....	Mrs. J. C. McCall..	Stockton	\$2 00
embroidery, tinsel.....	Mrs. J. F. Adams..	Stockton	\$2 00
embroidery in fl floss work.....	Miss Lizzette White..	Stockton	\$2 00
decorative darning in rope silk.....	Miss Lizzette White..	Stockton	\$2 00
display of embroidery of all kinds, variety considered.....	Miss Lizzette White..	Stockton	\$8 50
CLASS V.			
display of crochet, other than.....	Mrs. B. H. Brown..	Stockton	\$3 50
display of cotton crochet work.....	Mrs. A. M. Haines..	Stockton	\$3 50
display of cotton knitting work.....	Mrs. J. Giovanessi..	Stockton	\$3 50
display of cotton knitting work.....	Mrs. C. H. Keagle..	Stockton	Sp. men.
display of worsted knitting.....	Mrs. Mary Pennell..	Stockton	\$3 50
display of worsted knitting.....	Miss Hickman.....	Stockton	Sp. men.
display of worsted knitting.....	Mrs. Mary Pennell..	Stockton	\$3 50
display of worsted knitting.....	Mrs. C. H. Keagle..	Stockton	\$3 00
display of Spanish drawn work.....	Mrs. C. P. Baldwin..	Stockton	\$5 00
display of hand-made lace not named otherwise.....	Mrs. J. C. Reid.....	Stockton	\$3 50
display of hand-made lace not named otherwise.....	Miss Bassie Gall..	Stockton	\$3 00
display of hand-made lace not named otherwise.....	Mrs. C. H. Keagle..	Stockton	\$1 00
display of hand-made lace not named otherwise.....	Miss O. Thompson..	Stockton	\$3 00
CLASS VI—ARTICLES.			
bedspread.....	Mrs. Z. J. Fuller..	Stockton	\$3 00
bedspread.....	Mrs. A. Schirmer..	Sacramento	\$2 00
bedspread.....	Mrs. L. J. Watson..	Stockton	Sp. \$1 50
bedspread.....	Mrs. J. Massuo..	Stockton	Sp. \$1 50
bedspread.....	Mrs. J. F. Campbell, for Grayson Sewing Circle.....		Sp. men.
shawl, hand-made.....	Miss Hickman.....	Stockton	\$2 00
shawl, hand-made.....	Mrs. Jos. Hale.....	Stockton	Sp. \$1 00
carriage afghan.....	Mrs. Montgomery..	Stockton	\$2 00
carriage cushion.....	Mrs. J. C. McCall..	Stockton	\$2 00
carriage cushion.....	Mrs. John Wilson..	Stockton	\$1 50
carriage cushion.....	Mrs. R. W. Miller..	Stockton	Sp. \$1 00
carriage cushion.....	Mrs. J. F. Adams..	Stockton	Sp. men.
carriage cushion.....	Miss Lizzette White..	Stockton	\$2 00
carriage cushion.....	Miss E. H. Waters..	Stockton	\$1 50
carriage cushion.....	Lottie Dorr.....	Stockton	Sp. \$1 00
carriage cushion.....	Mrs. J. C. McCall..	Stockton	\$2 00
carriage cushion.....	Mrs. D. W. Davis..	Stockton	\$1 50
carriage cushion.....	Mrs. Montgomery..	Stockton	\$2 00
carriage cushion.....	Mrs. J. M. Dormer..	Stockton	\$1 50
carriage cushion.....	Mrs. Jos. Hale.....	Stockton	\$2 00
carriage cushion.....	Mrs. J. F. Adams..	Stockton	\$2 00
carriage cushion.....	Mrs. M. H. Ober..	San Francisco	\$2 00
carriage cushion.....	Mrs. J. F. Adams..	Stockton	\$2 00
carriage cushion.....	Mrs. J. D. Utt.....	Stockton	\$1 50
carriage cushion.....	Mrs. M. I. Howe..	Stockton	\$2 00
carriage cushion.....	Mrs. Montgomery..	Stockton	Sp. men.
specimen of fancy work, neither named nor entered in any class.....	Miss Nevada Jeffer-son.....	Stockton	\$2 50
specimen of fancy work, neither named nor entered in any class.....	Mrs. J. C. McCall..	Stockton	\$1 25
specimen of fancy work, neither named nor entered in any class.....	Miss Hickman.....	Stockton	Sp. \$1 00
specimen of fancy work, neither named nor entered in any class.....	Miss Laura Miller..	Stockton	Sp. \$1 00
specimen of fancy work, entered in this class and not entered in any other class, quality of work con- sidered.....	Mrs. J. F. Adams..	Stockton	\$7 50
specimen of fancy work, entered in this class and not entered in any other class, quality of work con- sidered.....	Mrs. J. M. Dormer..	Stockton	Sp. \$3 00

MISCELLANEOUS DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Spanish drawn handkerchief	Mrs. A. Schirmer	Sacramento
Toilet cushion and mat	Mrs. A. Schirmer	Sacramento
One piece of etching	Lottie Dorr	Stockton
Dress, hand-sewing, made by child nine years old	Sadie Dorr	Stockton
Hand-painted pillow shams.	Mrs. Frank Dunlap	Stockton
Combination collar and cuff box	D. W. Davis	Stockton
Collection of fancy household articles: baby basket, calendar, two bureau scarfs	D. W. Davis	Stockton
General exhibition of paintings in oil	Mrs. Frank Dunlap	Stockton
Display of patchwork quilts	Mrs. J. M. Dornier	Stockton
Corset waists display	Mrs. M. H. Ober	San Francisco
Rag carpet display	Mrs. M. H. Ober	San Francisco
Paints and oils	Whittier, Fuller & Co.	Stockton
Picture frames	Whittier, Fuller & Co.	Stockton
Artists' materials	Whittier, Fuller & Co.	Stockton
One hundred pounds Seneca Chief wheat	N. W. Hammond	Tulare
Kitchen cabinet	Bowdoin & Son	Stockton
Ant-proof meat safe	Bowdoin & Son	Stockton
Three sections of iron harrow	Matteson & Williamson	Stockton
One disk harrow	Matteson & Williamson	Stockton
One vineyard cultivator	Matteson & Williamson	Stockton
Two pairs stretchers	Matteson & Williamson	Stockton
Two pairs leadbars	Matteson & Williamson	Stockton
Sulky plow	Matteson & Williamson	Stockton
One garden gang plow	Matteson & Williamson	Stockton
Seven plow bottoms	Matteson & Williamson	Stockton
One spading harrow	H. C. Shaw	Stockton
One six-foot cut mower	H. C. Shaw	Stockton
One seeder and cultivator, spring tooth	H. C. Shaw	Stockton
Heads of Seneca Chief wheat	Mrs. Fannie L. Hammond	Tulare
One variety peach catsup	Mrs. Joseph Hale	Stockton
Nickel-plated work	L. O. Hudson & Son	Stockton
Display of silkworm eggs	Mrs. J. D. Utt	Stockton
Display of silkworm moths	Mrs. J. D. Utt	Stockton
Blush of Roses cosmetic	Miss M. Miller	Florin
Luxury cosmetic	Miss M. Miller	Florin
Bean's spray pump	D. C. Crummey	Los Gatos
Cluff's garment fastener	George F. Cluff	Lodi
Display of gentlemen's furnishing goods, two cases	Lothrop & Noble	Stockton
Six quinces	B. F. Langford	Lodi
Adjustable gang harrow	W. A. Zumalt	Farmington
Stump puller	William Daley	Sacramento
Display of ornamental grasses	R. P. Bates	Stockton
Display of artistic furniture	M. Schneider	Stockton
Model of combined electrical harvester	John E. Doak	Stockton
Two flowering pyrethrum plants	Buhach P. & M. Co.	Merced County
One box dried pyrethrum flowers	Buhach P. & M. Co.	Merced County
Microbe killer	J. E. Wood	Stockton
Exhibit of vegetables by one firm	L. W. Robbins	Stockton
Four sacks Australian wheat, imported from Australia	J. M. Welsh	Stockton
Exhibit of wheat raised in District No. 2	J. M. Welsh	Stockton
Exhibit of cornmeal	J. M. Welsh	Stockton
Exhibit of graham flour	J. M. Welsh	Stockton
Exhibit of cracked wheat	J. M. Welsh	Stockton
Display of patent medicines, manufactured by exhibitor	J. D. Gray	Stockton

MISCELLANEOUS DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Box of perfumes, manufactured by exhibitor	J. D. Gray	Stockton	Diploma.
Box of preparations, manufactured by exhibitor	J. D. Gray	Stockton	Sp. \$2 00
Box of bark, roots, and seed	Dr. Webb	Sacramento	Diploma.
Box of Fredericksburg lager beer	J. Herrmann	Stockton	S. medal or Dip.
Box of books	Herbert Baldwin	Stockton	Diploma.
Box of Semolino	J. M. Welsh	Stockton	Sp. men.
Box of extension ladders and scaffold	Austin Bros.	Stockton	Sp. Dip.
Box of compound	Mrs. H. Works	San José	Sp. \$2 00
Box of vaporstoves (three stoves)	John Jackson	Stockton	Diploma.
Box of appliances	John Jackson	Stockton	Sp. men.
Box of pumping pumps	John Jackson	Stockton	Diploma.
Box of horseshoes	Jackson & Earle	Stockton	Diploma.
Box of gunpowders	William Boyd	Stockton	Diploma.
Box of papers	J. C. Gage	Stockton	Sp. men.
Box of wheat	J. C. Gage	Stockton	Diploma.
Box of sewing and pencil work	J. W. Willey	Stockton	Diploma.
Box of grapes, and raisins	Jas. H. Crow	Stockton	Diploma.
Box of wire baskets	St. Mary's College	Stockton	Sp. \$3 00
Box of wire	L. W. Zimmerman	Stockton	Sp. \$2 00
Box of sewing machine	Mrs. J. W. Gann	Stockton	Sp. men.
Box of corn	Mrs. L. Wilson	Stockton	Sp. men.
Box of rice (first rice raised in San Joaquin County)	Mrs. Mary Pennell	Stockton	Sp. men.
Box of Salway peaches	F. M. Miller	Stockton	Sp. men.
Box of ment for headaches	M. G. Griffith	Union Island	Hn. men.
Box of wine, sarsaparilla, and iron water	L. L. Northup	Comanche	Hn. men.
Box of five oil paintings	J. W. Pendleton	San Francisco	Diploma.
Box of on branch	Schmidt & Co.	Stockton	Sp. men.
Box of five feet of grapevine, growth April 1, 1890	J. C. Bowden	Stockton	Sp. men.
Box of wild	J. C. Bowden	Stockton	Sp. men.
Box of woven lace	Mrs. M. Campodonico	Stockton	Sp. men.
Box of crocheted skirt, one bureau scarf, one case, basket made from fibers			
Box of century plant, two hairpin holders			
Box of wine holder, two pair children's shoes, one pair crocheted slippers			
Box of pair adult's undervests, two pair children's undervests, key holder, two graph holders, piece of tatting			
Box of lace crocheted and knitted lace			
Box of toilet set, four pincushions			
Box of worsted scarf, fascinator, cape, evening cases, three easel drapes			
Box of pocket, three head rests, five vases, nine bouquets of artificial flowers, artificial flowers in basket*			
Box of painting on bolting cloth	Patients of State Insane Asylum	Stockton	Sp. men. and \$10
Box of crocheted skirts	Mrs. W. N. Elsom	Stockton	Sp. men.
Box of sideboard, embroidered in silk patchwork	Mrs. W. N. Elsom	Stockton	Sp. men.
Box of Liberty, a blackboard decorated with chalk and white crayon	Mrs. W. N. Elsom	Stockton	Sp. men.
Box of made from the Arctic	John Ebert	Stockton	Hn. men.
Box of water engine	L. O. Hudson & Sons	Stockton	Sp. men.
	E. T. Wheat	Oakdale	Sp. men.

*Thanks to Mrs. Ramsey and Dr. R. N. Rucker for Asylum display.

MISCELLANEOUS DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Six pairs infants' knit shoes, four pairs infants' knit socks, three pairs slumber shoes, three pairs knit slippers, one pair ladies' vests, one pair gentlemen's vests, two knit purses of linen, one knit purse of silk.....	Mrs. T. W. Newell.....	Stockton.....
Watermelons.....	F. M. Miller.....	Lodi.....
Corn on ear, best variety.....	Mr. Irving.....	Clements.....
Two large bunches of grapes.....	Bush & Harlow.....	Hanford.....
Sultana grapes.....	J. C. Bowden.....	Stockton.....
Pickled figs.....	Asa Collins.....	Knights Ferry.....
Exhibition of oil paintings.....	Mrs. Frank Baldwin.....	Stockton.....
Grapes, oranges, walnuts, muscadines.....	Finley.....	Amador County.....
Shell work, flora from the Alps, leaves from Martin Luther's tomb.....	Unknown.....	.....

BABY SHOWS.

OCTOBER 1, 1890.

Name of Child.	Award.
CLASS A—TWELVE TO EIGHTEEN MONTHS.	
Sydney Sampson.....	
Anna Belle Moore.....	
CLASS B—SIX TO TWELVE MONTHS.	
E. Lyle Healy.....	
Florence Pease.....	
CLASS C—UNDER SIX MONTHS.	
Edwin Hamlet Smalley.....	
Fredericka Gerdes.....	

OCTOBER 3, 1890.

Name of Child.	Award.
CLASS A—TWELVE TO EIGHTEEN MONTHS.	
Joseph Silva Netto.....	
Myrtle Sanderson.....	
Mary Fisher.....	
Delveret Tillson.....	
Allela Simons.....	
CLASS B—SIX TO TWELVE MONTHS.	
Leslie Truscott.....	
Bessie Errol Simard.....	
Johnnie Roy Young.....	
Emanuel Souza.....	
Ethel Sweem.....	
Zelmar Eaton.....	
Cecil Blankenship.....	
CLASS C—UNDER SIX MONTHS.	
Asa Clark.....	
Anita Masters.....	
Leslie Chapple.....	
Geo. W. Perkins.....	
Annie Mathias.....	

COUNTY EXHIBIT.

Exhibit.	Exhibitor.	Address.	Award.
County exhibit.....	San Joaquin County.....	.....	...\$100 00

BENCH SHOW.

Exhibit.	Exhibitor.	Address.	Award.
COCKER SPANIELS.			
Under one year.			
age eleven months; color, liver and white.....	W. W. Stockwell.....	Stockton.....	V. H. C.
One year or over.			
age two years and two months; color, liver.....	A. C. Davenport.....	Stockton.....	1st med.
age three years and ten months; color, solid black.....	A. C. Davenport.....	Stockton.....	1st med.
age three years and nine months; color, liver and white and ticked.....	A. C. Davenport.....	Stockton.....	2d med.
age one year; color, solid black.....	A. C. Davenport.....	Stockton.....	2d med.
age two years; color, liver and white.....	A. C. White.....	Ripon.....	V. H. C.
PUGS.			
Under one year.			
age nine months; color, fawn and black.....	John E. Doak.....	Stockton.....	1st med.
age three months; color, fawn and black.....	A. Vobbe.....	Stockton.....	2d med.
age three months; color, fawn and black.....	Miss. M. C. Taylor.....	Stockton.....	2d med.
One year or over.			
age two years; color, fawn and black.....	A. Vobbe.....	Stockton.....	1st med.
English pug, age one year and three months; color, light brown.....	I. D. Holden.....	Stockton.....	V. H. C.
ENGLISH MASTIFFS.			
Under one year.			
age seven weeks; color, yellow, black nose and black ears.....	A. Spiegel.....	Stockton.....	H. C.
One year or over.			
age three years and eight months; color, yellow, black nose and black ears.....	A. Spiegel.....	Stockton.....	1st med.
age one year and nine months; color, yellow, black nose and black ears.....	Geo. Mosher.....	Stockton.....	2d med.
age one year and three months; color, fawn and black.....	John Busch.....	Stockton.....	V. H. C.
IRISH SETTERS.			
age two and one half years; color, red and white.....	R. S. Bates.....	Stockton.....	1st med.
age three and one half years; color, red and white.....	J. B. Lo Romer.....	Stockton.....	2d med.
YORKSHIRE TERRIERS.			
age four years; color, white.....	E. Oullahan.....	Stockton.....	1st med.
MISCELLANEOUS CLASS.			
age four months; color, fawn and white.....	John E. Doak.....	Stockton.....	2d med.

BENCH SHOW—Continued.

Exhibit.	Exhibitor.	Address.
NEWFOUNDLANDS.		
Budd, age eleven months; color, black and white	E. L. Colnon	Stockton
GREYHOUNDS.		
Swift, age six years; color, yellow, with bald face	C. De Carbie	Stockton
ENGLISH SETTERS.		
Lad, age four years; color, white and tan	J. S. Dunham	Stockton

Medals awarded at the First Annual Bench Show of Stockton Fair, 1894, delivered as per the above judgment made by H. H. Briggs.

Attest:

J. M. La Rue

THE STOCKTON DOG SHOW.

[San Francisco "Examiner."]

Stockton gave its first dog show on Friday and Saturday, third and fourth. It was proposed by J. M. La Rue, Secretary of the San Joaquin Valley Agricultural Association, and with the aid of I. D. Holden, J. E. Doak, and Dr. A. C. Davenport, was a successful end.

The season was unpropitious, for the reason that all dogs in California at this season are out of coat. The sporting dogs, setters, spaniels, and fox hounds have either been in continuous use in the field or are being prepared for such use, and are, consequently, not in the best flesh and coat to bench.

That Stockton, with none but local entries, could bench fairly good dogs is most creditable to the fanciers of that city.

The show was given in an annex to the main pavilion, in which the industrial exhibits are yearly made.

The prizes were medals of pretty designs and considerable value. A gold medal for first prize winners, and a silver medal for the second in each class.

Cocker spaniels were by far the best classes, both in number and quality. Dr. A. C. Davenport swept the bench with his cockers—Bronta, Kute, Maud E, and Jet R. They are of nice type, typical, and of good quality.

The pugs were only fair. First prize went to J. E. Doak's pug, a very nice dog, although a little coarse.

A very good mastiff was given a first medal. This was A. C. Davenport's Romeo, of good size, color, marks, and strength.

But one Newfoundland was shown, a very nice dog, Budd, in honor of Colonel Jim Budd.

An English setter, Lad, owned by J. S. Dunham, was far the best dog in the show, being of superb quality, good size, coat and markings, and excellent form.

The dogs were judged upon the main platform in the main pavilion, about which crowded the friends of those who had come to the exhibition. A dog show will be given each year hereafter in connection with the Stockton Fair.

RACING RECORDS.

CONTESTS ON THE STOCKTON TRACK—FROM THE FOUR-MINUTE RACES OF EARLY DAYS TO THE PERFORMANCE OF STAMBOUL.

By GEORGE H. TINKHAM.

The splendid pacing of Shippee's two-year old, Chief Thorne, at the first meeting of the San Joaquin Valley Agricultural Association, was one of the most important racing events of this county. Pacing two mile heats in 2:24 and 2:23½ on Tuesday, his mile of 2:20½ on Wednesday (the fastest mile ever paced in this State by a two-year old, only three seconds slower than Regal Wilkes' time, the world's fastest two-year old trotter), shows that San Joaquin is not behind other counties of California, nor the Eastern States, in raising fine racing stock. Chief Thorne, sired by Hawthorne, is a half brother to Vernon, both having the same dam, Daisy. She was sired by Captain, and her dam, Beauty, was by Copperbottom, a stallion brought to the plains early in the fifties by Alonzo McCloud. From Copperbottom, who perhaps might trot a mile in 4:00, to Chief Thorne, 2:20½, is but a baby colt, what a wonderful change. From the mustang who roamed the plains, drew the plow, and carried the pioneer upon his back, the stock of San Joaquin has been gradually improved until now, and at the first record meeting of the San Joaquin Valley Association, the youngsters and the aged horses are brought forward to beat time. In the association's track the fliers have often won victories from the "State of Maine." I remember, though but a lad, when first San Joaquin, through her District Fair, began her upward course. It was in 1860, when the horse who won the first race of that fair was a large dark bay, named American Hunter. The race was mile heats, with three starters, and a purse of \$50. The best time was 3:55, Hunter having a walk-off. He was a stallion owned by Grover, who brought him across the plains. Hunter's fame as a racer was short, as there came another stallion to the county, brought out by the same importer. He was a beautiful, large, iron-gray stallion with white mane and tail that reached to his knees, and as there were none to compete with the "State of Maine," he won the two heats alone in 3:02 and 2:59. The same year Lew Rattler, named after the minstrel and owned by J. S. Holden, owned by Charles Blood, and Mountain Boy, won a three-heat race, the best time being 2:50. In 1861, Yate's Young Sir Charles beat Patterson's Odd Fellow two mile heats in 3:06 and 3:05, and Rattler won easily in 2:57 over the same track. At that time everybody wanted a Black Hawk. They were indeed little animals, and in a race of Black Hawks over this track

for a special purse, open to the State, the time was reduced straight heats to 2:53 and 2:48½. State of Maine proved himself a five-mile horse by trotting the distance in 16:06. Black Hawk was the rage all over the State, and Dr. Holden, then the Society's favorite, bought the stallion Black Prince. J. K. Doak also bought Reuben. Dr. Holden thought he had the better horse, and laughed at him. The doctor changed his mind after the Reuben easily won in 3:06 and 3:07.

In 1863 that grand horse Owen Dale, Nina Sahib, Chieftain, and M. Patchen were exhibited at the fair. The time of the district was reduced by Washtenaw Chief to 2:49 and 2:45½, he, in the second heat, beating badly the time of the State race of 1862. Hamilton C. Emigrant trotted the first three-heat race in 2:56, 3:02, 3:00, the heat being dead. Reuben beat Dick five miles in 16:35, and Patchen took the \$100 purse in a two-mile heat race with John; time, 6:04, 5:58. The race of the week was one not yet finished between the celebrated horses of national fame, Geo. M. Patchen and Kentucky Hunter. They trotted for the citizen's purse of \$500, and \$100 added. There were five entries, the two named, Tecumseh, Taylor, and Young Sherman. Over this Friday race the town and county were wild, and over four thousand people were on the race. Bets were heavily made, the most of them upon Hunter, for he knew that Hunter had been taught a trick of breaking and running any point on the track. The rules then were not very strict regarding running, and Hunter's driver was bound to win. They trotted to James Eoff, the far-famed driver, speeding Patchen. The horses had been brought to California by steamer from New York. Both were big animals, Patchen, very large and a rich dark brown in color; Hunter, a medium-sized, dark chestnut. From the time they began racing, a start Hunter's driver began his trick of repeatedly breaking his horse, endeavoring thus to get a long ways the start, and so worry Patchen to tire him. He succeeded. They scored for half an hour, and the word was given to go, both horses were covered with lather and foam. Upon the first turn Patchen was honestly and squarely ahead of Hunter, and the latter broke and ran like a quarter horse until he led. Again and again this was repeated every time that Hunter passed Hunter, and the last named was given the heat, notwithstanding Eoff's protest. In the second heat the same performance took place, and Eoff, refusing to trot the third heat, Hunter was sent around the track alone, taking race and money. The track was heavy and the horse trotted twenty feet from the fence, yet the time (2:38, 2:38, 2:38) was the best ever made over this track. The following day (Saturday) Stevenson's filly, three years old, made a mile in 3:25, and it was a wonderful performance.

In 1864 Brown Mac, then five years old, owned by Mike Ryan, won in 2:47. He was so fast that the owners of the two horses trotting with him refused to start after the first heat. In the same week Seward trotted five miles out in 15:51. Seward, then owned by Huffman, was the best five-mile horse in the State. He was owned by Henry Trembly's thoroughbred Belshazzar, and could trot all day a heat horse he was also good, having made a mile in 2:46. Another of that year was for double teams, there being four starters. The time was 3:47 and 3:49.

The surprise in time-breaking in 1865 was made by Ross Sargent's Bell Ringer. He was an old stage horse, eighteen years old, and that the audience laughed when he was driven on the track. But after warming up, he trotted a mile in 2:51, beating Dooley's horse, twenty-one years old, the crowd shouted.

In 1866 the three-year old Fanny Dooley trotted a mile in 3:05; and in the State citizens' purse, Lady Tricks, in a three-mile heat race, best in three, distanced the field in 8:39.

In 1867 and 1868 the colts of the thoroughbred stallions began lowering district records, and Colonel Visser, by Chieftain, in a two in three mile race, beat R. S. Johnson's Indian pony, Paddy, in 2:50 and 2:52, taking the second heat in 2:51½.

In 1869 there was no San Joaquin Valley Association Fair held, but in place the stock association held a fair, and there was one splendid five race between Alecia, Mandeville, Princess, and Lady Bell. It was a State race for \$200, and the time was never before equaled, number of heats being considered, 2:38, 2:40, 2:38½, 2:38½, 2:41. Colonel Visser easily paced in 2:40, distancing Stockton Boy. Empress, the horse, took a race and purse in a six-heat race, making in the heat the best time, 2:37.

In 1870 J. K. Doak was elected President of the association, and the record was still further reduced, both in State and district trotting. A wonderful pacer, Defiance, by Chieftain, first made his appearance in 1870, winning three straight heats in 2:39½, 2:43, and 2:44.

In 1871 the Society began classifying trotters, and in the 2:40 class Drew Girl was beaten in a closely contested four-heat race, the best heat being 2:41.

In 1872 purses were divided into first, second, and third moneys, and in a three in five pacing race Defiance beat Longfellow and Trifle, Longfellow taking one heat in 2:32½.

In the first year of President Shippee's administration was 1875, and the number of races was then increased, and the purses hung up nearly equal in value to those of former years. Mr. Shippee's plan was to draw big crowds to the races by giving purses that would attract the horses of the State. Pacers, trotters, and runners contested in these races, and the State pacer, Dan Rice, lowered the track record considerably by pacing three straight heats in 2:28, 2:28, and 2:29. Treat won a race in the best six heats ever trotted upon the track, every heat being inside of 2:32, San Bruno taking the second heat in the very fast time of 2:23. Drew Girl, by Winthrop, imported from Maine by Yates and Green, trotted the last of a four-heat race in 1:47. Judge Terry's Norfolk colt ran a mile in 1:47.

In 1876 the collision took place between the pacers Jim Brown and Dan Rice; both drivers were thrown out and their sulkies smashed. It was a State race, but the Stockton pacer, Hi Tracy, took first money, it being his first race. The first heat was dead between Dan Rice and Hi Tracy, time, 2:23½. The district race was one of the most hotly fought over this track, between Solid Silver, Lightfoot, Drew Girl, Hunter, and Daisy, in a three in five race. Four heats were run the first day, each horse taking a heat, except Lightfoot, in the time: Drew Girl, 2:39½; Daisy, 2:38½; Hunter, 2:38; Silver, to 2:37. In the fifth heat, on Thursday, Lightfoot was sent to the track and Jennie Hunter took the fifth and seventh heats and race.

Mollie Drew, the grandam of Freedom, then three years old, made a mile in 2:55.

In 1878 mile heats were trotted by State horses, and every one better than 2:25. Compare this with the Black Hawk race of the district stallion race Arnold's Nephew took three straight heats, first, second, 2:37½; McCloud's Daisy took a three in five trot, first heat, in 2:36½, and seventh heat in 2:43. The first heat was won by Reliance in 2:33. In that year the two splendid stallions, Fullerton and Nutwood, appeared with the gelding Occident to win the \$1,000 purse. Fullerton took the three heats in the time, not excelled in several years, 2:18½, 2:19½, 2:19½. In that year, December twelfth, a race against time took place, \$500 added to the purse if Rameau won time of 2:13. John Splan drove him in his two trials, 2:14½, 2:14½. He also drove the pacer Sweetzer three heats in 2:16½, 2:17½, 2:17½. That was a wonderful exhibition performance. The horse came from the East to give exhibitions in this State, but now such time is unusual in a race.

In 1879 sixteen races took place, and Santa Claus, in a field of four, distanced four of them in the first heat in 2:22; yet there were none broken, save in the two-year old race, the first two-year old trot of the Society. Walter Morris' Upright beat Dodge's Honesty in 2:58½. Nutwood was outtrotted by St. Julian; best time, 2:17. Nutwood, on November twenty-seventh, was driven to beat his own record, 2:19, by John Williams. In the first trial he trotted in 2:21½; second trial, 2:21½; third trial, 2:18½.

In 1880 he was again started to beat his record at the fair, but by his owner, J. W. Knox, but failed to beat 2:19. The same year Honesty, three years old, made a mile in 2:38½, and Crandall's Alexander Button, three years old, made a mile in 2:32.

Sixteen races took place in 1882—four running, one pacing, one driving, and ten trotting—ten of the sixteen being open to the State.

In 1883 the horses of this district were believed to be inferior to those of other districts, and there was but one district race. It was won by Lucille, a three-year old; best time, 2:34½. In the two-year old State race of that year Mount Vernon, by Nutwood, took the first and third heats and the second, 2:47½, 2:43½. Cora took the second heat in 2:44½.

In 1884 twenty-one races came off, and forty trotters, nineteen runners and three pacers started, yet there was no remarkable time made, and records lowered. Voucher, however, did some splendid trotting, three-year old—2:33½, 2:30½, 2:32½.

In 1886 Stamboul, then three years old, made his first appearance and won the first two heats in a three in five race in 2:33½ and 2:34½. Again was the record broken when Nellie R. Guy Wilkes, Adair's Manon sped by the stand for a \$1,000 purse, divided. Nellie R. Guy took the first, second, and last heats of seven, Wilkes second. The second heat was won in 2:17½ and the last in 2:21½.

In 1887 Stamboul, whose fast mile, the fastest ever trotted on the Stockton track (2:11), has just delighted California horsemen, made his appearance, he being entered in the 2:22 class. There were five starters, and the last three heats were taken by Stamboul. The first two heats were trotted, the second and fastest heat of the race, 2:17½, was a dead heat between Stamboul and Lot Slocum. Arab that year lowered the three fastest heats of the track, excepting that of Judge Fullerton, 2:20, and 2:19½, beating Adair for the \$1,200 purse. Like an arrow from the bow flew the little pacer Arrow, taking his race in three heats, 2:16½, 2:14, and 2:19½.

1888 Stockton proved her trotters inferior to none, when Steve, but four years old, beat the horses of his class and trotted his heat in 2:23. Arab that year outtrotted Stamboul and Lot Slocum, the time of the first three heats being 2:16, 2:15½, and 2:17½.

The strange and astonishing was the principal event of 1889, the race of Palo Alto in 2:13½, third heat, the fastest heat ever made in the world upon this coast, and only excelled in the world's record by one heat, Occident, owned by Leland Stanford, pushed Fullerton the three heats ever trotted up to that period, and now Palo Alto, owned by Senator Stanford, winning the race from Bay Rose and lowered the heat record to a point seldom reached by any racing horse.

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 23, 1890.

RACE No. 1—RUNNING.

The Sargent Stakes. A sweepstake for three-year olds (foals of 1887), to be run at the Stockton Fair in 1890; one hundred dollars each, of which ten dollars must accompany the nomination; ten dollars payable January 1, 1889; ten dollars payable January 1, 1890; twenty dollars payable May 1, 1890; the remaining fifty dollars to be paid by six o'clock the day preceding the race. Payments not made as they become due forfeits money paid in, and declares entry out; five hundred dollars added, of which one hundred and fifty dollars to second; third to save stake. Winner of the Breeders' Stake at Sacramento to carry five pounds extra; of the President Stake, seven pounds; of any other three-year old event, three pounds; maidens allowed seven pounds. One mile and a half.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Adelaide, by Grinstead; dam, Victoria.	E. S. Paddock	Sacramento.
Stella S, by Joe Hooker; dam, Tillie C	L. U. Shippee	Stockton.
Bonnie Brook, by Tenbroeck; dam, Brown Kate	L. U. Shippee	Stockton.
Falsalara, by Falsetto; dam, Salara	L. U. Shippee	Stockton.
Fellowcharm, by Longfellow; dam, Trinket.	L. U. Shippee	Stockton.
Major Ban, by King Ban; dam, Hearsay	L. U. Shippee	Stockton.
Elsie S, by Gleneig; dam, Myriad.	L. U. Shippee	Stockton.
Mabel F, by Longfellow; dam, Carrie Phillips.	L. U. Shippee	Stockton.
—, by Norfolk; dam, Flora	J. McNasser	Sacramento.
—, by Joe Hooker; dam, Addie C.	J. McNasser	Sacramento.
Evaline, by Flood; dam, Lady Evangeline	Palo Alto Stock Farm.	Menlo Park.
Glenloch, by Flood; dam, Glenluine	Palo Alto Stock Farm.	Menlo Park.
Jessie C, by Bishop; dam, Jennie C	Palo Alto Stock Farm.	Menlo Park.
Racine, by Bishop; dam, Fairy Rose	Palo Alto Stock Farm.	Menlo Park.
Flambeau, by Wildidle; dam, Flirt	Palo Alto Stock Farm.	Menlo Park.

SUMMARY.

Mabel F W. O.

RACE No. 2—DISTRICT TROTTING.

Two-year Old Stake. Fifty dollars each; one hundred and fifty dollars added; first horse, fifty per cent; second, twenty-five per cent; third, fifteen per cent; fourth, ten per cent. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
—, by Hawthorne; dam, a Silverthread mare.	J. E. Moore	Stockton.
Farmington Boy, by Dexter Prince; dam, by Chieftain	T. J. Drais	Farmington.
Pilot Prince, by Dexter Prince; dam, by Nutwood	D. Young	Stockton.
Elastic, by Election; dam, by Romulus	R. G. Brush	Stockton.
Eda, by Harry Gear; dam, Mollie.	George Kneier	Stockton.
Arnot.	N. B. Whittaker	Copperopolis.
Ella M, by Richards' Elector; dam, Becky	L. A. Richards	Grayson.
L A, by Richard's Elector	L. A. Richards	Grayson.
Daisy Vernon, by Mount Vernon; dam, by Berkeley	J. A. McCloud	Stockton.

SUMMARY.

Pilot Prince 1 1
Elastic 2 dis.
Eda dis.

Time—2:52½; 2:47½.

RACE No. 3—TROTTING.

3.00 Class. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
—,	S. H. Crane	Turlock.
—,	F. P. Wickersham	Fresno.
Una Wilkes, by Guy Wilkes; dam, Blanche.	San Mateo Stock Farm	San Mateo.
Homestake, by Gibraltar; dam, Kate, by Volunteer	Pleasanton St'k Farm.	Pleasanton.
Beaury Mc, by Nephew; dam, by Alexander.	Percy Williams	Undine.
Ariana, by Ansel; dam, Rebecca	Palo Alto Stock Farm.	Menlo Park.
Vic H, by Blackbird; dam, Ellen Swigert	D. M. Reavis	Chico.
Kilrain, by Hawthorne; dam, by Whipple's Hambletonian	L. U. Shippee	Stockton.

SUMMARY.

Homestake 1 1 1
Beaury Mc 2 2 2

Time—2:24; 2:17½; 2:18½.

RACE No. 4—RUNNING.

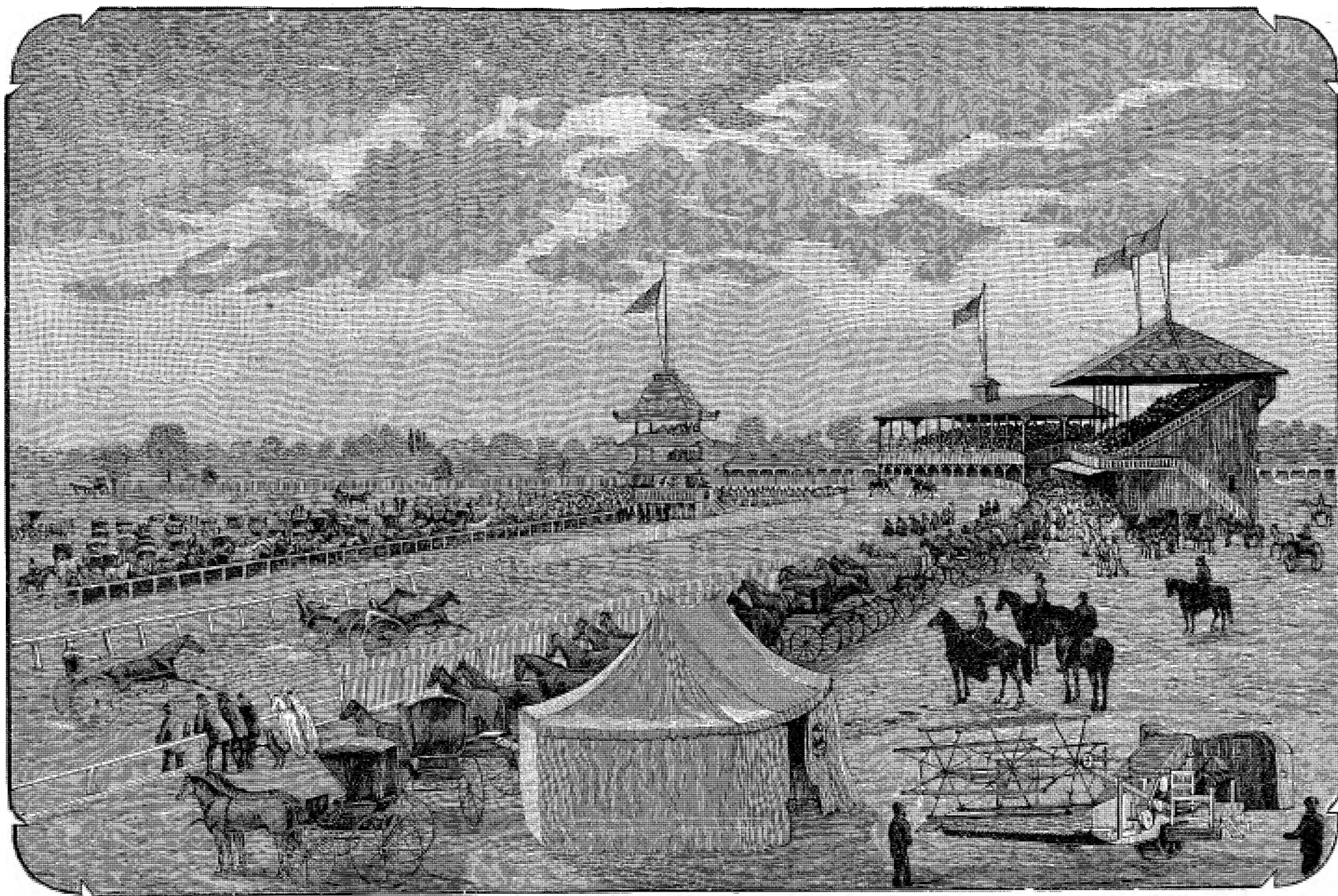
Handicap sweepstake for three-year olds. Fifty dollars each, h. f., or fifteen dollars declaration; two hundred and fifty dollars added; second horse to save stake. One and one sixteenth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Marigold, by Milner; dam, Katy Pease	Matt. Storn	Sacramento.
Mabel F, by Longfellow; dam, Carrie Phillips.	L. U. Shippee	Stockton.
Take Notice, by Prince Charlie; dam, by Nota Bene	L. U. Shippee	Stockton.
Rico, by Shannon; dam, Fannie Lewis	L. J. Rose	Los Angeles.

SUMMARY.

Mabel F 1
Marigold 2
Rico 8

Time—1:49.



RACE TRACK AND PARK, STOCKTON, CALIFORNIA.

TRANSACTIONS OF THE
WEDNESDAY, SEPTEMBER 24, 1890.

RACE No. 5—RUNNING.

The Pavilion Stake. A sweepstake for two-year olds (foals of 1888), to be run at the Stockton Fair of 1890. Fifty dollars each, h. f., or only ten dollars if declared before January first; or fifteen dollars by May 1, 1890. Declarations void unless accompanied by the money; with three hundred dollars added; of which seventy-five per cent, second; third to save stake. Winner of any stake race to carry three pounds or more, five pounds extra. Maidens allowed five pounds. Five eighths of a

Name and Pedigree of Horse.	By Whom Entered.
Rinfax, by Argyle; dam, imp. Amelia	Undine Stable
Sinfax, by Wildidle; dam, Postress	L. J. Rose
Conrad, by Flood; dam, imp. Goula	L. J. Rose
Mero, by Wildidle; dam, Precious	Owens Bros.
Oscar, by Wildidle; dam, imp. Petroleuse	L. J. Rose
Rico, by Shannon; dam, Fannie Lewis	L. J. Rose
Minnie B, by Prince of Norfolk; dam, by Wildidle	Dan Dennison
Jubilee, by King Light; dam, Lady Clare	J. B. Chase
Mystery, by Three Cheers; dam, Mistake	J. B. Chase
Cheerful, by Three Cheers; dam, Queen Emma	Schweier, Whedin & Napier
Lodowic, by Longfellow; dam, Carrie Phillips	L. U. Shippee
May H, by Falsetto	L. U. Shippee
False Queen, by Falsetto; dam, Queen Victoria	L. U. Shippee

SUMMARY.

Lodowic
Mero
Cheerful

Time—1:05.

RACE No. 6—RUNNING.

For all ages. Purse, five hundred dollars. First horse, sixty per cent; second, thirty per cent; third, ten per cent. One mile.

Name and Pedigree of Horse.	By Whom Entered.
Picnic, by imp. Mr. Pickwick; dam, imp. Countess	L. U. Shippee
Tycoon, by Shiloh; dam, Margery	Percy Williams
Sheridan, by Young Bazaar; dam, Lost Girl	P. Siebenthaler
Carmen, by Wildidle; dam, Nettie Brown	W. L. Appleby
Alfarata, by Wildidle; dam, a Monday filly	Orville Appleby
Daisy D, by Wheatly; dam, Black Maria	Owens Bros.

SUMMARY.

Carmen
Daisy D
Alfarata

Time—1:42½.

SECOND DISTRICT AGRICULTURAL ASSOCIATION.

RACE No. 8—TROTTING.

Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
P. by Brilliant; dam, Maud	D. R. Mizner	Petaluma.
by A. W. Richmond; dam, by Overland	Phillips Bros.	Fresno.
by Meredith; dam, Black Bess	Owens Bros.	San José.
	C. H. Corey	San Francisco.
	P. Brandow	

SUMMARY.

Mattie P. 1 1 2 1
Prince B. 3 2 1 3
Blackwood 5 4 3 2
May V. 4 5 4 4
Barbero 2 3 5 dis.

Time—2:33; 2:29; 2:34; 2:29.

MATCH RACE—TROTTING.

Purse, five hundred dollars each. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
mare	Percy Williams	Stockton.
mare	F. D. Cobb	Stockton.

SUMMARY.

Balkan mare 1 1 2 1
Gypsy 2 2 1 2

Time—2:40½; 2:35½; 2:37½; 2:35.

RACE No. 9—TROTTING.

Purse, five hundred dollars. Mile heats, best three in five. Fifty dollars each; one hundred and fifty dollars added. First horse, fifty per cent; second, twenty-five per cent; third, fifteen per cent; fourth, ten per cent.

Name and Pedigree of Horse.	By Whom Entered.	Address.
mare, by Elect; dam, Fannie, by Bonner	J. E. Moore	Stockton.
Ticket, by Dexter Prince; dam, by	Funck Bros.	Farmington.
by Richards' Elector; dam, by Duke	Funck Bros.	Farmington.
by Mt. Vernon; dam, by Chieftain	Geo. French	Stockton.
mare, by Hawthorne; dam, by Priam	L. U. Shippee	Stockton.

SUMMARY.

Lottery Ticket 1 1 1
J. E. Moore 2 2 2
Countess dis.

Time—2:39; 2:39; 2:34.

THURSDAY, SEPTEMBER 25, 1890.

RACE No. 10—RUNNING.

The Yosemite Stake. A sweepstake for two-year olds (foals of 1888), to be run at Stockton Fair of 1890. Seventy-five dollars each, h. f., or only ten dollars if declared on or before January first; fifteen dollars by May first, or twenty-five dollars if declared on or before January first; with three hundred and fifty dollars added; of which one hundred dollars to second; third to save stake. Winner of Stake for 1890 at Sacramento to carry seven pounds extra; winner of any other stake to carry three pounds; of two or more, seven pounds extra; maidens allowed Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rico, by Shannon; dam, Fannie Lewis.....	L. J. Rose.....	Los Angeles.
Conrad, by Flood; dam, imp. Goula.....	L. J. Rose.....	Los Angeles.
Oscar, by Wildidle; dam, imp. Petroleuse.....	L. J. Rose.....	Los Angeles.
Mero, by Wildidle; dam, Precious.....	Owens Bros.....	Los Angeles.
Sinfax, by Wildidle; dam, Fostress.....	L. J. Rose.....	Los Angeles.
Rinfax, by Argyle; dam, imp. Amelia.....	Undine Stable.....	Los Angeles.
Minnie B, by Prince of Norfolk; dam, by Wildidle.....	D. Dennison.....	San Francisco.
Mystery, by Three Cheers; dam, Mistake.....	J. B. Chase.....	San Francisco.
Cheerful, by Three Cheers; dam, Queen Emma.....	Schweier, Wheden & Napier.....	Los Angeles.
Lodowic, by Longfellow; dam, Carrie Phillips.....	L. U. Shippee.....	Stockton.
May H, by Falsetto; dam, Glenluine.....	L. U. Shippee.....	Stockton.
False Queen, by Falsetto; dam, Queen Victoria.....	L. U. Shippee.....	Stockton.

SUMMARY.

Conrad

RACE No. 11—RUNNING.

Handicap sweepstake. For all ages; fifty dollars each, h. f., or fifteen dollars if declared on or before January first; two hundred and fifty dollars added; one hundred dollars to second; one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Marigold, by Milner; dam, Katy Pease.....	Matt. Storn.....	San Francisco.
Lurline, by Longfield; dam, Katy Pease.....	Matt. Storn.....	San Francisco.
Alfarata, by Wildidle; dam, Mary Givens.....	W. L. Appleby.....	Los Angeles.
Picnic, by imp. Mr. Pickwick; dam, Countess.....	L. U. Shippee.....	Los Angeles.
Take Notice, by Prince Charlie; dam, Nota Bene.....	L. U. Shippee.....	Los Angeles.
Mabel F, by Longfellow; dam, Carrie Phillips.....	L. U. Shippee.....	Los Angeles.
Minuet, by Rayon D'Or; dam, Rainbow.....	L. J. Rose.....	Los Angeles.

SUMMARY.

Take Notice

Lurline

Time—1:58.

RACE No. 12—TROTTING.

for four-year olds.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mc, by Nephew; dam, by Alexander.....	Percy Williams.....	Undine.
by Dexter Prince; dam, by Tom.....	B. F. Langford.....	Lodi.
by Dexter Prince; dam, by Hawthorne.....	L. M. Morse.....	Lodi.
by Lynwood; dam, by Nutwood.....	U. S. Gregory.....	Ione.
by Hawthorne; dam, by Whipple's.....	L. U. Shippee.....	Stockton.

SUMMARY.

Henry Mc	1	1	1
Chloe	3	2	dis.
Lynette	2	4	dis.
James L.	4	3	dis.

Time—2:33½; 2:33½; 2:21½.

RACE No. 13—SPECIAL PACING.

five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Hummer, by Sidney; dam, Humming Bird.....	J. Garrity.....	San Francisco.
by Sidney; dam, unknown.....	John McConnell.....	San Francisco.
Gold Medal, by Nephew; dam, unknown.....	E. F. Heald.....	San Francisco.
Alice, by Dexter Prince; dam, Mollie.....	John Patterson.....	Linden.

SUMMARY.

Princess Alice	1	1	1
Gold Medal	2	2	2
Hummer	3	3	3
Surprise			dis.

Time—2:18½; 2:20; 2:21.

FRIDAY, SEPTEMBER 26, 1890.

RACE No. 15—RUNNING.

Miner's Stake. A sweepstake for two-year old fillies (foals of 1888), to be run at Stockton Fair of 1890; forty dollars each, h. f., or fifteen dollars if declared on or before May 1, 1890, with two hundred and fifty dollars added; of which fifty dollars to second. Winners of any stakes to carry five pounds extra; of two or more, seven pounds; maidens allowed five pounds. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Wildidle; dam, imp. Teardrop.....	Palo Alto Stock Farm.....	Menlo Park.
by Flood; dam, Flirt.....	L. J. Rose.....	Los Angeles.
by Argyle; dam, Fairy Rose.....	L. J. Rose.....	Los Angeles.
by Flood; dam, Frolic.....	L. J. Rose.....	Los Angeles.
by Prince of Norfolk; dam, by Wildidle.....	D. Dennison.....	Sacramento.
by Three Cheers; dam, Queen Emma.....	Schweier, Wheden, & Napier.....	Pleasanton.
by Falsetto; dam, Glenluine.....	L. U. Shippee.....	Stockton.
by Falsetto; dam, Queen Victoria.....	L. U. Shippee.....	Stockton.

SUMMARY.

Fairy

RACE No. 14—RUNNING.

Handicap sweepstake for two-year olds; fifty dollars each, h. f., or ten dollars if declared January 1, 1890; two hundred and fifty dollars added. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Age
Acclaim, by Three Cheers; dam, Rosette.....	G. H. Kennedy	2
Lodowic, by Longfellow; dam, Carrie Phillips.....	L. U. Shippee	2
Seminola, by Hindoo; dam, Katy.....	L. J. Rose.....	2

SUMMARY.

Acclaim

Seminola

Time—1:16½.

RACE No. 17—SPECIAL TROTTING.

Purse, two hundred dollars. First horse, fifty per cent; second, twenty-five per cent; third, fifteen per cent; fourth, ten per cent. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Age
Mambrino Chief, by McDonald Chief; dam, by Mambrino Patchen	Thos. Smith	3
Latham Almont, by Tilton Almont; dam, by Oregon George	C. A. Brown	3
Clay Duke, by Alcona; dam, by Duke of Orange.....	J. M. Martin.....	3
Foxy V, by Meredith; dam, Black Bess.....	P. Brandow	3

SUMMARY.

Clay Duke.....

Foxy V.....

Mambrino Chief.....

Latham Almont.....

Time—2:36; 2:31½; 2:32½.

RACE No. 17½—SPECIAL PACING.

For three-year olds. Purse, three hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Age
Vigor, by Sterling; dam, by Prompter	William Harlan.....	3
Brilliantine, by Brilliant; dam, by Prompter	Sam Hoy	3
Falrose, by Fallis; dam, Roseleaf.....	Frank P. Lowell.....	3

SUMMARY.

Brilliantine

Vigor

Falrose

Time—2:28; 2:36; 2:30½; 2:30.

RACE No. 18—TROTTING.

Class. Guaranteed purse, one thousand dollars. First horse, fifty per cent; second, twenty-five per cent; third, fifteen per cent; fourth, ten per cent. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wikes, by Guy Wilkes; dam, Blanche	Owens Bros.	Fresno.
General Lee; dam, Sister Taylor.....	San Mateo Stock Farm	San Mateo.
by Benefit; dam, Laura C.....	Geo. W. Theuerkauf	Gonzales.
by Blackbird; dam, Ellen Swigert	Palo Alto Stock Farm.....	Menlo Park.
Washington, by Mambrino Chief, Jr.;	D. M. Reavis	Chico.
Fannie Rose	Thos. Smith	Vallejo.
	L. U. Shippee.....	Stockton.

SUMMARY.

Geo. Washington.....

Lee

Time—2:33; 2:27½; 2:26; 2:25½; 2:25½; 2:23½.

RACE No. 18½—SPECIAL.

Class. 8 to trot one half mile to beat 1:04½, her own record. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Director; dam, Mayday	Pleasanton St'k Farm.....	Pleasanton.

SUMMARY.

Margaret S

Time

Time—1:04½.

SATURDAY, SEPTEMBER 27, 1890.

RACE No. 19—RUNNING.

Big Tree Stake. A sweepstake for three-year olds, to be run at the Stockton Fair, 1890. One hundred dollars each, h. f., or only ten dollars if declared January 1, 1890; two hundred and fifty dollars added; of which one hundred dollars May first, or twenty-five dollars August 1, 1890; declarations void if not accompanied by the money; with four hundred dollars added; of which one hundred dollars to second; third to save stake. Winner of any three-year race of the value of one thousand dollars to carry five pounds extra; of two year old events of any value, ten pounds; maidens allowed seven pounds. One

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Three Cheers; dam, Sugena	C. V. Tupper	Santa Rosa.
by Double Cross; dam, Aurora	C. V. Tupper	Santa Rosa.
by Flood; dam, Lady Evangeline	W. M. Murry	Sacramento.
by Flood; dam, Glendew, by Glen.....	L. J. Rose	Los Angeles.
by Bishop; dam, Jennie C, by Nor.....	Sierra Foothills Co.	
by Bishop; dam, Fairy Rose, by Kis.....	Sierra Foothills Co.	
by Wildidle; dam, Flirt, by Hermit.....	Sierra Foothills Co.	

RACE No. 19—Continued.

Name and Pedigree of Horse.	By Whom Entered.
Adelaide, by Grinstead; dam, Victoria	E. S. Paddock
Lady Emily, by Three Cheers; dam, Queen Emma	T. G. Jones
May Dunbar, by Leinster; dam, Lizzie Dunbar	W. L. Pritchard
Fabiola, by Warwick; dam, Maggie S	C. Halverson
Willoughby, by Jocko; dam, Fannie D	Maltese Villa Stable
Kiff Kiff, by Jocko; dam, Lizzie A	Maltese Villa Stable
King David, by Kyrle Daly; dam, Trophy	B. P. Hill
Stella S, by Joe Hooker; dam, Tillie C	L. U. Shippee
Falsalara, by Falsetto; dam, Salara	L. U. Shippee
Whisban, by King Ban; dam, Whisperine	L. U. Shippee
Elsie S, by Glenelg; dam, Myraid	L. U. Shippee
Bonnie Brook, by Tenbroeck; dam, Bonnie Kate	L. U. Shippee
Mabel F, by Longfellow; dam, Carrie Phillips	L. U. Shippee
Take Notice, by Prince Charlie; dam, Nota Bene	L. U. Shippee
Fellowcharm, by Longfellow; dam, Trinket	L. U. Shippee
Major Ban, by King Ban; dam, Hearsay	L. U. Shippee
—, by Norfolk; dam, Flora	J. McNasser
Sacramento, by Joe Hooker; dam, Ada C	J. McNasser
—, by Norfolk; dam, Marion	Theo. Winters
Rascal, by Joe Hooker; dam, Mattie Glenn	Theo. Winters

SUMMARY.

Take Notice.....

RACE No. 20—RUNNING.

Stockton Stake. Handicap sweepstake for all ages; fifty dollars each, h. f.; two hundred and fifty dollars added; second to save stake. One sixteenth miles.

Name and Pedigree of Horse.	By Whom Entered.
Marigold, by Milner; dam, Katy Pease	Matt. Storn
Lurline, by Longfield	Matt. Storn
Odette, by Shiloh; dam, Margery	W. L. Appleby
Alfarata, by Wildidle; dam, Mary Givens	W. L. Appleby
Mabel F, by Longfellow; dam, Carrie Phillips	L. U. Shippee
Picnic, by imp. Mr. Pickwick; dam, Countess	L. U. Shippee
Take Notice, by Prince Charlie; dam, Nota Bene	L. U. Shippee
Rico, by Shannon; dam, Fannie Lewis	L. J. Rose

SUMMARY.

Rico.....
Odette.....
Take Notice.....

Time—1:48.

RACE No. 21—RUNNING.

Sweepstake for all ages; fifty dollars each, h. f.; two hundred and fifty dollars added; second to save stake. Non-winners this year that have been beaten once allowed three fourths of a mile. Three fourths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
—, by Kyrle Daly; dam, Mistake	Matt. Storn	Sacramento.
—, by Three Cheers; dam, Rosette	G. H. Kennedy	Santa Rosa.
—, by Wheatly; dam, Black Maria	Owens Bros.	Fresno.
—, by Wildidle; dam, Nettie Brown	W. L. Appleby	Santa Rosa.
—, by imp. Mr. Pickwick; dam, Countess	L. U. Shippee	Stockton.

SUMMARY.

Daisy D..... 1
Acclaim..... 2
Carmen..... 3

Time—1:15.

RACE No. 22—SPECIAL TROTTING.

one hundred dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
—, by Hawthorne; dam, by McCrack-Black Hawk	L. U. Shippee	Stockton.
—, by Meredith; dam, Black Bess	P. Brandow	Sau Francisco.
—, by P	D. R. Mizner	Petaluma.

SUMMARY.

Moses S..... 1 1
Mattie P..... 2 2
Fury V..... dis.

Time—2:22½; 2:25.

REPORT OF RACES.

[From the "Breeder and Sportsman."]

It very rarely happens that a day's racing has to be postponed a month of September in California, yet still we have had just such an experience during the last week at the Stockton Fair. The racing on Tuesday, the twenty-third instant, but the attendance was as large as is usually the case. At the annual meeting of the San Mateo Agricultural Association the farmers turn out en masse for miles to witness the contests of speed, which are usually of the most exciting nature. The opening day for 1890 was an exception to the rule; the attendance was small, although very enthusiastic. The various events on the programme for the day were of a mixed nature, there being trotting races and a running race, the latter causing the sportsmen to feel happy, as the winner turned up in one of Mr. Shippee's horses, being supposed that she had no chance at all by those who are called "the talent."

There is no doubt but that the absence of the San Mateo Stock stable, the Palo Alto stable, and Frank Burke's stable tended to diminish the interest, they having left Stockton out of their circuit, going from the State Fair to Fresno.

FIRST DAY.

On the cards of the day the first race announced was a handicap for three-year olds; the distance being one mile and one eighth. For this three starters came to the post, they being J. B. Chase's Marigold, Rose's Rico, and L. U. Shippee's Mabel F; \$25 was bid for the favorite being Marigold, while \$10 or \$11 was bid for Mabel F, who was selling for \$9; the latter horse was at one time in the spring of last year backed to win the Suburban, but owing to his getting loose from the stall prior to his trip back East, he was considerably bruised and has not been in condition to run since. While in the Palo Alto he was considered one of the California cracks, but his escape from the Bay District track has evidently made him more wary and more apt to operate in speed, and at present he is far from being what he was. The starter was Mr. Wm. Coombs of Napa, who got them off in a very even send off, Marigold attempting to make pace; Rico kept close alongside of Mr. Chase's filly, and the two were well ahead all the way up the backstretch, Mabel being a very close coming into the homestretch Marigold altered her position and came to the inside, the three coming down the straight in a bunch. About one sixteenth of a mile from the wire, Rico, who was being severely punished, swerved and jostled Marigold, Marigold caroming over Rico, Mabel F. Rico, still receiving the lash, was under the wire

length in front of Mabel, Marigold being a length in the rear. Mr. Chase claimed that Mr. Chase's filly had lost the race owing to the foul, and asked the Judges to decide in her favor, but after a consultation the race was awarded to Mabel F, Marigold second, and Rico third.

The two-year old district stake for trotters brought out Pilot Prince, Elastic, and Eda. This contest was very uninteresting, owing to the fact that Pilot Prince, he having the others completely at his mercy. In two heats were of such an uninteresting character that it is unnecessary to give a description of them. Pilot Prince won the first in 2:52½, Elastic, and also won the second in 2:47½, the gait being too slow for Elastic, who was behind the red flag when the winner passed the wire.

The last event on the card was very exciting, and was enjoyed by all spectators. It was for a purse of \$1,000 for the 2:30 class of trotters, only two putting in an appearance being Mr. Salsbury's Homestake, who has lately arrived from the Montana and Oregon circuit, where he won a large majority of races in which he started; his competitor being Percy Williams' Beaury Mc, who has made a name for himself all year throughout the California circuit. Those who usually hang round the pool box for the purpose of getting a good thing, were not to put up \$50 for Mr. Williams' entry, while Homestake found lots of supporters who were willing to risk \$40 on his chances of winning. At the very first attempt the word was given, Beaury Mc having the lead, and he took the lead almost immediately, being a good two lengths in advance as they passed from the first turn into the backstretch. At the half-mile post the gap had been diminished a trifle, Homestake being like a porous plaster. In swinging into the upper turn, Beaury made a most disastrous break, and before he settled Homestake was some lengths in front. The driver of Beaury Mc made a spurt for the heat, but without success, as his horse a second time went into the stand and Homestake had no trouble in winning in 2:24, Beaury being a half dozen lengths in the rear.

In the second heat the betting changed but very little, \$30 still being for Beaury Mc, while Homestake sold readily for \$25. After scoring the word was given, Homestake having a trifle the best of the send off, trotted down the straight and into the turn at a very fast gait, giving the backstretch fully a length to the good; notwithstanding the pace was a very hot one, Beaury Mc clung to the leader, and as they passed into the homestretch it was anybody's race, a length still between the two horses. At this point both of the drivers called on their charges, and without a skip or break they passed under the wire, Homestake winning by two lengths. When the time was hung out, those who had been supporting the Stockton horse at once endeavored to hedge, and Homestake was made a favorite at \$25 to \$6. On the second attempt the word was given, and Homestake again took the lead, the quarter-pole being a length in front of his opponent. These relative positions were maintained around the upper turn and into the backstretch, there being no perceptible difference between them; well called on Homestake, and gallantly the son of Gibraltar came under the wire winner by two lengths in 2:18½.

SECOND AND THIRD DAYS.

During the evening of Tuesday rain came down quite heavy on Wednesday morning, after a consultation, the Directors deemed it expedient to postpone the programme which had been arranged for Wednesday, and announced that the two days' programme would be held off on the following afternoon, the track being considered unsuitable for horses. This announcement, however, was not made until almost 10 o'clock in the afternoon, and by that time quite a number of spectators had gathered at the track. After the President of the association made his speech from the Judges' stand, there was an immediate discussion among the crowd for their money, which had been paid in advance. As a large number had passed in on season tickets, it was arranged that those who were present should receive tickets entitling them to admission on another day, which was, under the circumstances, the best that could be done. On Thursday afternoon there was an enormous attendance present, the grand stand being packed, while a large number of spectators were inside the inclosure, and tended largely to enliven the scene.

Six races were on the card, owing to the rain the day before, the programme can be readily understood, everything had to go with a rush, and to enable all the contests to take place. The first event was a five-furlong dash of a mile; those coming to the post being the Fashionable, Cheerful, Owens Bros.' Mero, and L. U. Shippee's Lodowick. In the pools, Mr. Shippee's entry was a decided favorite, he bringing two over the field. Some little delay was occasioned by the fractiousness of the horses, but the flag at last fell to a very even start; the favorite had no difficulty in winning very easily in 1:05, Mero second, Cheerful third, and Lodowick lengths behind.

Another running race was on the programme to follow the first, the starters being Carmen, Daisy D, and Alfarata, Carmen being the choice in the pools, selling for \$25; Daisy D brought \$15, while Alfarata's chances were sold at the insignificant sum of \$5. As the favorites were successful in their choice, for although Alfarata was in the lead, with the favorite in the rear, at the half-mile pole the horses were bunched, and from there out the race was virtually over, as the men had things all her own way, notwithstanding the fact that Daisy D challenged her down the straight, but could not head the favorite, who passed under the wire in 1:44½, Daisy D being two lengths behind, while Alfarata was almost a dozen in the rear.

A mile and an eighth dash for all ages had only two starters, Storn's Lurline and L. U. Shippee's Take Notice. The latter was the favorite at \$40, while the short-enders were willing to pay \$10 for Lurline's chances. There was no difficulty in getting the horses off, and they passed under the wire the first time they were neck and neck, and there was no time during the race that the proverbial blanket could have covered both of them. Coming down the home stretch, the whip was applied very vigorously to Lurline, but Take Notice passed under the wire winner by a short length, his rider using excellent judgment, as it was not necessary to apply whip or spur to him.

The next event on the programme was a special trotting race for named horses, the entries being Mattie P, Barbero, Foxy V, and Prince B. Mattie P having already shown her qualifications, she was immediately installed as favorite, although Prince B had

being considered by the local people that he had a strong chance to win. Mattie had no difficulty in pulling off the first heat in 2:29, and also won the second in 2:29. Notwithstanding that the mare had already two heats to her credit, the backers of Prince B were still willing to buy their choice at almost the same price as was paid for Mattie. To show that their confidence was not misplaced Prince B won the third heat in 2:34, although Mattie quickly decided the race in the fourth heat by winning again in 2:29.

The district three-year old trot was nothing more than a walk-over for Lottery Ticket, the other two starters being Countless and Elect. This was an uninteresting race, as Lottery Ticket was much the best of the lot, winning the first heat in 2:39, Countless being distanced. In the second heat, which was negotiated in exactly the same time, Elect Moore was distanced, although the driver of Lottery Ticket held his horse to almost a walk to enable Elect to save his distance. We now come to the pacing race, in which there were Princess Alice, Hummer, Gold Medal, and Sunrise. Owing to what Hummer had previously shown on the circuit, he was a pronounced favorite, selling for \$18, while Princess Alice brought \$18, the field selling for \$3. The first heat was considerable of a surprise party to those who had bought the favorites, as Princess Alice and Gold Medal cut out the pace, the mare winning in the remarkably good time of 2:18½; Hummer was third, and Princess Alice was distanced.

The second heat was but a repetition of the first, the daughter of Dexter Prince again winning in 2:20, Gold Medal second, and the favorite third. A great deal of time was consumed in getting the horses off for the third heat, President Shippee having to deliver a lecture, and, as patience ceased to be a virtue, imposed a fine on one of the drivers, and drew out cheers from the spectators. When the word was finally given, the driver of Alice resumed his tactics of the two former heats, and kept the mare going for all there was in her; she was never headed, and, as she pleased, in 2:21, with Gold Medal second, and Hummer third, the two having a narrow escape from a shut out.

FOURTH DAY.

On Thursday witnessed another large attendance, both of the grand stands being jammed, while there were more vehicles present than on any other day. This was probably owing to the many attractions which were billed for the afternoon, among which was an exhibition of vaquero riding, the entertainment being equal to anything ever seen on the coast. A balloon race was also added to the interests of the day, in addition to which there were several good races.

The first event on the card was the Yosemite Stake, the only entry to the race being Mr. Rose's Conrad, who had a walk-over; rather strange to say, the second event was for two-year old fillies, four-furlongs of a mile, and again Mr. Rose had a walk-over, his filly, evidently having frightened out the balance of the entries.

There came a match race for two-year olds, between Acclaim and Semi-Comet, the latter selling for \$30 against \$25 for Acclaim. The favorite went out at a terrific pace, and at the head of the stretch was three lengths in advance, but there she shut up like a jackknife, and Acclaim won with difficulty in winning hands down, in 1:15½.

The 2:30 class for district horses brought out Beaury Mc, Chloe, and James L. Beaury Mc was known to have so much that there were no pools sold on him, but with Mr. Williams' barred Lynette was a strong favorite. In the first and second Beaury simply jogged around in the slow time of 2:33½ and 2:34½, Lynette showing in the last heat considerable distress. For the third Beaury Mc was turned loose, and trotted in 2:21½, distancing Lynette. In showing why this fast heat was made, the following from the London "Independent" will explain matters:

It began to appear that Lynette had no chance for second place. As Perry had backed the horse strongly, he was anxious to get his money back at least. In the racing rules that where a horse distances the field he is entitled to third money, and the second money is withheld. A distanced horse gets no money. Beaury succeeded in shutting out the field there would be no second money, and the pools that were sold on the field would be declared off, and Williams would even. So he instructed the driver of Mc to shut out the field, which was not a hard thing for the fast trotter to do. Mc sped around the course in the time of 2:21½, and distanced the field, as he was expected to do, Odette second and Lynette third.

Considerable excitement was experienced during the match race between Mr. Williams' Sultan mare and F. D. Cobb's Gypsy. A great deal of money went into the pool box on this event, the horses selling for about even money. Gypsy in the first heat proved rather unsteady, and consequently the Sultan mare won two heats very readily in 2:40½ and 2:35½, but at this juncture the Judges were complained to, that the mare performed a part of the pacing, so the Marshal was instructed to gallop around the track with the horses and see if any pacing or running was indulged in. In the third heat the verdict was reversed, Gypsy winning in 2:37½, the mare breaking when close to the distance flag. The fourth heat was very close and exciting one, the two trotting very steadily. As the horses passed into the homestretch it was anybody's race. At the upper end of the grand stand Gypsy made a break which won the race, the Sultan mare winning in 2:35.

In the special trotting race the entries were Mambrino Chief, Almont, Foxy V, and Clay Duke; the latter sold in the pool against \$10 for the field. The confidence of Clay Duke's backers was not misplaced, as he won the race in three straight heats, the time being 2:36, 2:31½, and 2:32½.

The last event on the day's programme was a pacing race for year olds, which, owing to the darkness, was unfinished at the close of the day's sport. The entries were Brilliantine, Falrose, and Vigor. Brilliantine sold favorite at \$25, Vigor bringing \$16, while Falrose for \$8. In the first heat the favorite behaved very badly, breaking frequently, and it looked when coming down the homestretch as if the driver of the favorite was making determined efforts to shut the horse out. This was noticed by the Judges, and when the second heat appeared for the second heat Dustin was requested to get up for the favorite. Vigor won the first heat in 2:28, Falrose being second. A change in drivers proved advantageous to those who had the horses. Dustin forged at once to the front and was never headed in the second. The time was 2:36, Falrose finishing second. The third heat was a mere repetition of the second, Brilliantine winning in the fairly close time of 2:30½.

FIFTH DAY.

The attendance at the race track on the last day of the meeting was quite so large as it had been on the two preceding days, yet still the crowd in attendance was enough to satisfy the Board of Directors. Taken all in all, it must be confessed that notwithstanding the one day, the fair has been eminently successful.

The first thing on the programme was the pacing race which had been postponed from the preceding afternoon, and notwithstanding the fact that Brilliantine made a very disastrous break immediately after starting the wire, yet still on steadying down he had no trouble in beating his opponents, making the mile and winning the race in 2:30. In the Big Tree Stake, Take Notice was the only horse that came to the wire, and consequently he had a walk-over for it.

In the Stockton Stake, a mile and a sixteenth, a big upset was received. The talent. The starters were Rico, Take Notice, and Odette. As it was supposed, Odette was a terrific favorite, selling at \$40, Take Notice \$20, and Rico \$10. When the flag fell, Take Notice and Odette started the pace, leaving Rico in the rear by some five open lengths of the colt. When at the head of the stretch, Rico's jockey let go the reins of the colt, and in a few moments he demonstrated that he was the best in the race, for the gap was soon closed, and a slashing race ensued in the straight, Rico winning by a head from Odette in 1:48.

The next race was a three-quarter mile dash, Carmen being the choice of the knowing ones, the other two starters being Daisy D and Acclaim. Carmen, however, never was in it, for Daisy D and Acclaim fought for the honors, Daisy D being the one to pass first under the wire, with Acclaim second.

The 2:30 trotting class brought out Lee and George Washington. As it was only natural to suppose after Lee's performances along the line, he was made a decided favorite, selling for \$25 to \$12 for Mr. Smith's money. Lee won the first heat in the very slow time for him of 2:33. In the second heat, however, Washington showed his backers what he was capable of by winning it in 2:27½, Lee having made a bad break at the start. The third heat was rather a facer for those who were backing Lee, for Washington again won, this time in 2:26. The fourth heat was a very close one, they going around the track like a double, making a dead heat in 2:25½. In the fifth heat Lee's backers continued to have a little more confidence, as he won that in 2:25½, but by a head only. In the sixth heat both horses were on their mettle, and the drivers used every endeavor to make their respective charges. Again it was a neck and neck race, and as they passed under the wire in the grand stand and in front of the Judges' stand began to hear the cry "dead heat;" however, the decision of the Judges was that Lee wins the heat and race." Time, 2:23½. Three better heats, fourth, fifth, and sixth were never seen on the track.

The final race was then announced, the starters being Moses S, Mattie, and Foxy V. Moses S trotted the first mile without skip or break, Foxy V being shut out, and Mattie only saved her distance by a short length. Moses S won the second heat and race in 2:25; Mattie being given second money.

The race given during the afternoon was given a half mile, the announce-

ment being made that she would attempt to lower her record made at Sacramento. Although she was accompanied by a mare the best the speedy mare could do was to equal her Sacramento record.

During the afternoon the ladies' equestrian tournament took place, the contestants being Miss Edith Bailey of Stockton, Miss Lola of San Joaquin County, and Mrs. Trefry of Sacramento. The first was awarded the first premium to Miss Bailey, second to Miss Taylor and third to Mrs. Trefry.

FIRST ANNUAL RECORD MEETING.

NOVEMBER 18, 1890.

RACE No. 1—TROTTING.

For named horses to beat 2:30. Gold and silver medals. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lambert, by Ben Franklin; dam, by Dan'l	L. U. Shippee.....	Stockton.
.....	D. J. Spellman.....	Stockton.
.....	Funck Bros.	Farmington.

SUMMARY.

Col. Lambert	1 *
Hand	3 1
Lizzie F.	2 2

Time—2:29½; 2:36½.

Under rule, went to stable.

RACE No. 2—TROTTING.

Against his record, 2:22½. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	L. U. Shippee.....	Stockton.

SUMMARY.

Moosa S	1
Time	2

Time—2:22½.

RACE No. 3—TROTTING.

Match race, to beat 2:30. Purse, one hundred dollars; also, gold and silver medals. Best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	L. U. Shippee.....	Stockton.
.....	J. A. McCloud.....	Stockton.

SUMMARY.

Chief Thorne	1 1
Mount Vernon	2 2

Time—2:24; 2:23½.

RACE No. 4—TROTTING.

Against time, 2:29½.

Name and Pedigree of Horse.	By Whom Entered.
Lottery Ticket, by Dexter Prince; dam, by Nutwood.....	Funck Bros.

SUMMARY.

Lottery Ticket.....

Time

Time—2:26¾.

NOVEMBER 19, 1890.

RACE No. 5—TROTTING.

To beat 2:30. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Captain Thorne, by Hawthorne; dam, June 2d, by Ben Franklin.....	L. U. Shippee.....
Chloe, by Dexter Prince; dam, by Hawthorne.....	L. M. Morse.....

SUMMARY.

Chloe.....

Captain Thorne.....

Time—2:34½; 2:33¼; 2:35½.

NOVEMBER 20, 1890.

RACE No. 6—TROTTING.

Against his record, 2:11½. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Stamboul, by Sultan; dam, by Hambletonian.....	W. S. Hobart.....

SUMMARY.

Stamboul.....

Time

Time—2:11¼.

RACE No. 7—PACING.

Against his record, 2:23½.

Name and Pedigree of Horse.	By Whom Entered.
Chief Thorne, by Hawthorne; dam, Daisy, by Chieftain.....	L. U. Shippee.....

SUMMARY.

No time taken, and went to stable.

RACE No. 8—TROTTING.

Purse, one hundred dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Hiram; dam, by Chieftain.....	D. Leiginger.....	Turlock.
by Richards' Elector; dam, by Duke.....	Funck Bros.	Farmington.

SUMMARY.

Mare.....

Lizzie F.....

1 2 1
2 1 2

Time—2:30½; 2:41; 2:34.

RACE No. 9—RUNNING.

Purse, thirty dollars. Entrance fifteen dollars, and Society adding fifteen dollars. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Joe Hooker; dam, by Planter.....		
by Chief, by Protestant; dam, Mattie C.....		
by Boy, by Rackety Jack.....		

SUMMARY.

Idaho Chief.....

Calaveras Boy.....

Phantom.....

1
2
3

Time—1:20.

RACE No. 10—TROTTING.

Against his record, 2:22½. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Hawthorne; dam, by McCracken's.....	L. U. Shippee.....	Stockton.

SUMMARY.

Mare S.....

Time

1
2

Time—2:19½.

NOVEMBER 22, 1890.

RACE No. 11—TROTTING.

Against his record, 2:29½. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Ben Franklin; dam, by Daniel.....	L. U. Shippee.....	Stockton.

SUMMARY.

Col. Lambert.....

Time

1
2

Time—2:27.

RACE No. 12—TROTTING.

Against his record, 2:19½.

Name and Pedigree of Horse.	By Whom Entered.
Moses S, by Hawthorne; dam, by McCracken's Black Hawk	L. U. Shippee

SUMMARY.

Time
 Moses S.
 Time—2:20.

RACE No. 13—TROTTING.

Against his record, 2:26¾. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Lottery Ticket, by Dexter Prince; dam, by Nutwood	Funck Bros.

SUMMARY.

Lottery Ticket.....
 Time
 Time—2:25.

RACE No. 14—TROTTING.

Against his record, 2:11¼. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Stamboul, by Sultan; dam, by Hambletonian.	W. S. Hobart

SUMMARY.

Time
 Stamboul.....
 Time—2:13½.

RACE No. 15—PACING.

Against his record, 2:23½. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Chief Thorne, by Hawthorne; dam, Daisy, by Chieftain	L. U. Shippee

SUMMARY.

Chief Thorne.....
 Time
 Time—2:20½.

RACE No. 16—TROTTING.

Against his record, 2:21. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mount Vernon, by Nutwood; dam, by Chieftain.	J. A. McCloud	Stockton.

SUMMARY.

Time 1 1
 Mount Vernon 2 2
 Time—2:24; 2:24.

RACE No. 17—TROTTING.

Matched race. Purse, one hundred dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Dexter Prince; dam, by Hawthorne.	L. M. Morse	Lodi.
by Hiram; dam, by Chieftain	D. Leiginger	Turlock.

SUMMARY.

Heat..... 2 1 1
 Close..... 1 2 2
 Time—2:33¼; 2:34¾; 2:40.

NOVEMBER 29, 1890.

RACE No. 18—TROTTING.

Against his record, 2:11¼.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Stamboul, by Sultan; dam, by Hambletonian.	W. S. Hobart	San Francisco.

SUMMARY.

Stamboul..... 1
 Time 2
 Time—Quarter, 0:32¾; half, 1:05½; three quarters, 1:39¾; mile, 2:11.

RACE No. 19—PACING.

Against his record, 2:20½. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Chief Thorne, by Hawthorne; dam, Daisy, by Chieftain	L. U. Shippee	Stockton.

SUMMARY.

Chief Thorne..... 1
 Time 2
 Time—2:20.

RACE No. 20—TROTTING.

Against his record, 2:21. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Mount Vernon, by Nutwood; dam, by Chieftain	J. A. McCloud

SUMMARY.

Time
 Mount Vernon
 Time—2:23 $\frac{3}{4}$.

RACE No. 21—TROTTING.

Against his record, 2:19 $\frac{1}{2}$. Purse, one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Moses S, by Hawthorne; dam, by McCracken's Black Hawk	L. U. Shippee

SUMMARY.

Time
 Moses S
 Time—2:20.

STAMBOUL, 2:11.

[From the "Breeder and Sportsman" of December 6, 1890.]

W. S. Hobart, of San Francisco, may well be congratulated for the success which attended his horse Stamboul on Saturday last at Stockton, as on that day he succeeded in lowering his record, making it in the good time of 2:11. On Wednesday evening of last week Goldsmith came down from Stockton and went to San Mateo Farm, where he wished to handle some colts on the following day. While driving a yearling by Sable Wilkes, a chain bit which he used gave way, and Mr. Goldsmith was precipitated from the seat, incurring injuries which prevented his going back to Stockton until the following Saturday. Mr. Sam Gamble, Superintendent of Mr. Hobart's stock farm, was immediately notified, and paying Mr. Goldsmith a visit, started immediately for this city to secure the services of the old time reinsman, Orrin Hickok, to drive Stamboul on the day set for the trial. There was not a very large attendance, but the enthusiasm displayed by those present more than made up for the lack in numbers.

After several preliminary jogs, which were necessary to get the horse up, and everything being in readiness, Hickok nodded his head and word and was sent off for the mile in which he was destined to

the stallion record of the coast. Instead of coming down close to the wire, Hickok was fully a dozen or fifteen feet out toward the middle of the track, taking that position, as he afterwards said, for the purpose of being able to make a better turn after leaving the wire. The horse was rated well, going the first quarter in 33 seconds, and to the half mile pole in 1:05 $\frac{1}{2}$. At the half mile pole Willis Parker had been stationed to tell Hickok how fast he was going, the driver not carrying a watch himself. As he came to the pole Hickok called, "How fast?" and Parker answered "1:05;" the fraction Hickok did not hear, and called to him, Parker shouting "1:05 $\frac{1}{2}$." This of itself took some time, and it is not to be wondered at that the third quarter was not negotiated in less than 30 seconds. On the third quarter Hickok called for Whiting, who was driving the runner, to come up, but Whiting misunderstood his instructions and kept behind, so the horse was simply going on his own course and not receiving as much advantage as he might have had if the runner had been close to him. Turning into the homestretch, Stamboul came with the speed of the wind, and the last quarter was negotiated in 31 $\frac{1}{2}$ seconds, although there were many who timed the last quarter separately in 31 $\frac{1}{2}$. The timers, John C. Shelley, James Thompson, and D. Young, sent the announcement up to the Judges: time, 2:11.

When Hickok dismounted from the sulky he was warmly congratulated on the magnificent feat, but looking up to the blackboard on which the time had been announced, he said, "It is a ——— pity that he couldn't have knocked off another quarter of a second." In conversation with Mr. Hickok, he stated that having witnessed Nelson in several of his performances this year, he was satisfied in his own mind that Stamboul was the greatest stallion that ever stood on iron, and that he felt assured that another week of good weather the Maine champion would have to wear his colors. Of course it is only problematical now what time could have been made by Stamboul, as the rain of the last few days has taken away any chance that he might have had, as no more trials will be given the son of Sultan this year. Mr. Hickok is also authority for the statement that Stamboul can beat Nelson any mark in the road, and that he is a truer trotter, and finishes his miles in much better shape than does Nelson. Two years in succession has Stamboul been robbed of prospective trials by the elements, and it can only be hoped that next year he will have "better luck."

On the same day Chief Thorne, a two-year old pacer, owned by L. U. Shippee, was sent a mile to beat his record of 2:20 $\frac{1}{2}$. The game young horse was at his best, and notwithstanding that he made a bad break, owing to interfering with one of his boots, he settled nicely and finished in 2:10, lowering his record by half a second.

Mount Vernon, Princess Alice, and Moses S were also driven exhibition miles.

TRANSACTIONS

OF THE

THIRD DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Butte, Tehama, and Colusa.

REPORT.

CHICO, December 31, 1890.

OFFICERS OF THE ASSOCIATION.

W. A. SHIPPEE.....
JO D. SPROUL, Chico.....
JOHN R. ROBINSON, Chico.....

DIRECTORS.

W. A. SHIPPEE..... Nelson, Butte Co.
F. C. LUSK..... Chico, Butte Co.
J. M. GARNER..... Chico, Butte Co.
T. P. HENDRICKS..... Chico, Butte Co.
D. M. REAVIS..... Chico, Butte Co.
THOS. B. HUTCHINS..... Gridley, Butte Co.
C. H. MERRILL..... Willows, Colusa Co.
BRUCE B. LEE*..... Red Bluff, Tehama Co.

*Deceased.

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Third (3d) District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

JO D. SPROUL,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

Balance from 1889	\$671 21	
Private subscriptions	1,240 00	
Privileges at track	822 50	
Gate receipts at track	917 00	
Gate receipts at Pavilion	424 00	
State aid	3,000 00	
Entrance money	3,290 00	
Balance		\$10,364 71
		101 47
		\$10,466 18

Expenditures.

Balance, 1889	\$5 00	
Interest, 1889	104 17	
Interest, 1890	2 00	
Labor	998 75	
Merchandise	380 87	
Premiums	1,431 00	
Purses	5,324 00	
Salary	352 50	
Subscription to National Trotting Association	50 25	
Advertising	416 30	
Rent of Park	700 00	
Rent of Pavilion	150 00	
Music	130 00	
Water	140 00	
Sprinkling	48 00	
Stew	20 00	
Expressage and freight	7 65	
Postage	11 50	
Telegraphing	2 70	
Lumber	91 42	
Undries	150 07	
		\$10,466 18

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBREDS—STALLIONS.		
Barham, three years old and over	J. C. Moore	Moore's Station
San Luis Obispo, three years old and over	J. H. Stephenson	Chico
CLASS II—GRADED HORSES—STALLIONS.		
Sherman, three years old and over	N. B. Scott	Nelson
Blackbird, three years old and over	D. M. Reavis	Chico
Burwell, two years old	D. M. Reavis	Chico
MARES.		
Vic H, three years old and over	D. M. Reavis	Chico
Lady Caro, two years old	A. L. Nichols	Chico
FAMILIES.		
Blackbird and five colts	D. M. Reavis	Chico
Ellen Swigert and two colts	D. M. Reavis	Chico
CLASS III—HORSES OF ALL WORK—STALLIONS.		
Dunois, three years old and over	L. H. McIntosh	Chico
Pride of Butte, three years old and over	M. Cummings	Nelson
Geo. Washington, two years old	Luke Jenkins	Colusa
MARES.		
Katie Bertem, three years old and over	Boone Jones	Chico
FAMILIES.		
Dunois and four colts	L. H. McIntosh	Chico
CLASS IV—DRAFT HORSES—MARES.		
Maggie Schultz, three years old and over	Boone Jones	Chico
DRAFT TEAMS.		
Bally and Tom	J. H. Guill & Son	Chico
CLASS V—ROADSTERS—STALLIONS.		
Stranger, three years old and over	W. W. Marshall	Willows
GELDINGS.		
Fashion, four years old and over	T. H. Barnard	Chico
Albert V, four years old and over	J. B. McLane	Corning
CLASS VI—DOUBLE TEAMS.		
Addie B and Silvia	A. L. Nichols	Chico
CLASS VII—CARRIAGE HORSES.		
Fannie	H. S. Hosler	Nord
Rosie	N. B. Scott	Nelson
CLASS VIII—SADDLE HORSES.		
W Montrose	W. M. Billups	Colusa
Jack Randolph, Jr.	J. V. Flint	Chico
CLASS IX—COLTS.		
Boulanger, one year old	R. McEnespy	Chico
Deacon, one year old	R. McEnespy	Chico
Mattie, one year old	L. H. McIntosh	Chico

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
one year old	L. H. McIntosh	Chico	\$2 00
suckling	L. H. McIntosh	Chico	\$5 00
suckling	L. H. McIntosh	Chico	\$5 00
suckling	L. H. McIntosh	Chico	\$5 00
Butte Wilkes, suckling	J. V. Flint	Chico	\$2 00
CLASS II—JACKS AND MULES—JACKS.			
three years old and over	D. M. Reavis	Chico	\$15 00
three years old and over	John Crouch	Chico	\$7 50
two years old	John Crouch	Chico	\$10 00
one year old	R. H. Blunkall	Chico	\$5 00
JENNIES.			
Belle	John Crouch	Chico	\$7 50
Queen	R. H. Blunkall	Chico	\$3 50
MULES.			
and Logan	D. D. Harris	Chico	\$7 50
water	D. D. Harris	Chico	\$5 00
CLASS II—JERSEYS—COWS.			
three years old and over	U. B. Collins	Chico	\$15 00
three years old and over	U. B. Collins	Chico	\$8 00
CLASS III—DEVONS—BULLS.			
Duke, three years old and over	Boone Jones	Chico	\$15 00
two years old	R. McEnespy	Chico	\$10 00
Tom, one year old	R. McEnespy	Chico	\$5 00
COWS.			
over five, three years old and over	R. McEnespy	Chico	\$15 00
three years old and over	R. McEnespy	Chico	\$8 00
Butte, calf	R. McEnespy	Chico	\$4 00
CLASS IV—DURHAMS—BULLS.			
three years old and over	J. H. Guill & Son	Chico	\$15 00
calf	J. H. Guill & Son	Chico	\$4 00
COWS.			
three years old and over	J. H. Guill & Son	Chico	\$15 00
Beauty, three years old and over	E. Findley	Chico	\$8 00
two years old	J. H. Guill & Son	Chico	\$10 00
calf	J. H. Guill & Son	Chico	\$4 00
CLASS V—POLLED ANGUS—BULLS.			
three years old and over	F. Ackerman	Chico	\$15 00
Jack, calf	F. Ackerman	Chico	\$4 00
COWS.			
Toppy, three years old and over	F. Ackerman	Chico	\$15 00
Chico, three years old and over	F. Ackerman	Chico	\$8 00
Lizzie, calf	F. Ackerman	Chico	\$4 00
GRADED SHEEP.			
three ewes	Boone Jones	Chico	\$5 00
three ewes	Boone Jones	Chico	\$5 00
THOROUGHBRED SWINE.			
Berkshire boar	J. H. Skinner	Durham	\$8 00
Berkshire boar	J. H. Guill & Son	Chico	\$4 00
Berkshire sow	J. H. Skinner	Durham	\$5 00
Berkshire sow	J. H. Skinner	Durham	\$3 00
pigs under six months	J. H. Guill & Son	Chico	\$5 00
PURE-BRED POULTRY.			
not less than five vari-	C. C. Goree	Chico	\$7 50
Light Brahmas	Zion Moore	Chico	\$2 50
Brahma cock under one	Zion Moore	Chico	\$2 50

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best pair Buff Cochins	Mrs. B. J. Patterson.	Chico
Best pair Black Spanish	C. C. Goree	Chico
Best pair White Leghorns	F. Wakefield	Chico
Best pair Brown Leghorns	J. H. Guill & Son	Chico
Best pair Silver Spangled Polish	A. C. Bay	Chico
Best pair Game	Wm. Bay	Chico
Best Game cock under one year	J. F. Holland	Chico
Best pair Black Game	Geo. Ashley	Chico
Best pair Duck-Wing Game	J. F. Holland	Chico
Best pair Golden Seibert Bantams	W. S. B. Wilson	Chico
Best pair Game Bantams	Zion Moore	Chico
Best pair Japanese Bantams	A. C. Bay	Chico
Best pair Dominiques	C. C. Goree	Chico
Best pair Plymouth Rocks	E. J. Cartwright	Chico
Best pair Wyandottes	F. Wakefield	Chico
Best breeding pen	Wm. Bay	Chico
Best pair Bronze turkeys	J. F. Holland	Chico
Best Bronze turkey gobbler	J. F. Holland	Chico
Best pair Gray China geese	Zion Moore	Chico
Best pair Muscovy ducks	J. F. Holland	Chico
Best pair Cayuga ducks	J. F. Holland	Chico
Best pair Rouen ducks	J. F. Holland	Chico

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Model fire escape	J. H. Wiseheart	Chico
Best plowshare	John Shannon	Chico
Best singletree iron	John Shannon	Chico
Best electric drinking fountain	W. S. Van Sant	Chico
Best washing machine	Jos. Scott	Chico

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Best knit silk stockings	Mrs. E. Findley	Chico
Best knit silk socks	Mrs. E. Findley	Chico
Best knit silk mittens	Mrs. E. Findley	Chico
Best display of knit lace	Mrs. E. Findley	Chico
Best crochet bedspread	Mrs. D. Breslauer	Chico
Best hooked rugs	Mrs. E. A. Pegdan	Chico
Best display of crochet lace	Miss B. Patrick	Chico
Best pair knit silk stockings	Mrs. C. C. Goree	Chico
Best crochet rug by girl under twelve years	Miss Dora Goree	Chico
Best ten yards rag carpet	Mrs. N. E. Bachelor	Chico
Best knit wool stockings	Miss P. Patterson	Chico
Best knit rug	Mrs. J. F. Enther	Chico
Best braided rug	Mrs. John Shannon	Chico
Best collection of rugs	Mrs. John Shannon	Chico
CLASS II.		
Best point lace	Mrs. Geo. Snook	Chico
Best display of crochet tidies	Mrs. Geo. Snook	Chico
Best etched pillow sham	Miss Edna Snook	Chico
Best display of fancy nightgowns	Mrs. D. Breslauer	Chico
Best knit wool skirt	Mrs. D. Breslauer	Chico
Best crochet lamp mat	Mrs. Wm. East	Chico
Best embroidered panel	Mrs. Wm. East	Chico

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Spanish or drawn work	Mrs. Wm. East	Chico	\$2 00
Play of Kensington embroidery	Mrs. Wm. East	Chico	\$2 50
Embroidered fire screen	Mrs. Wm. East	Chico	\$2 00
Child's afghan	Mrs. Wm. East	Chico	\$2 00
Hand-made carriage afghan	Mrs. Wm. East	Chico	\$2 00
Indian embroidery	Mrs. Wm. East	Chico	\$2 00
Machine embroidery	Mrs. Wm. East	Chico	\$2 00
Knitted scarf	Mrs. Wm. East	Chico	\$5 00
Embroidered table scarf	Mrs. Wm. East	Chico	\$2 00
Embroidered wall pocket	Mrs. Wm. East	Chico	\$2 00
Pillow in arrasene	Mrs. Wm. East	Chico	\$1 00
Play of point lace handkerchiefs	Mrs. Boone Jones	Chico	\$10 00
Point lace collars and cuffs	Mrs. Boone Jones	Chico	\$2 50
Board cover	Mrs. Wm. East	Chico	\$2 00
Wool towel	Mrs. Wm. East	Chico	\$2 00
Embossed brass	Mrs. Wm. East	Chico	\$2 00
Pillow in crewel work	Mrs. Wm. East	Chico	\$2 00
Butterfly	Mrs. Wm. East	Chico	\$1 00
Embroidered table cover	Mrs. C. G. Warren	Chico	\$2 50
Embossed sofa cushion	Mrs. C. G. Warren	Chico	\$2 00
Embroidered chenille embroidery	Mrs. C. G. Warren	Chico	\$2 00
Embroidered pieces etching	Mrs. C. G. Warren	Chico	\$2 00
Artificial wax flowers	Mrs. C. G. Warren	Chico	\$2 00
Play of fancy tidies	Mrs. C. G. Warren	Chico	\$2 00
Crochet bead purse	Mrs. C. G. Warren	Chico	\$1 00
Crochet fascinator	Mrs. C. G. Warren	Chico	\$1 00
Embroidered picture drapes	Mrs. C. G. Warren	Chico	\$1 00
Embroidered quilt	Mrs. E. A. Warren	Chico	\$5 00
Embossed ottoman	Mrs. J. F. Holland	Chico	\$2 00
Crochet shawl	Mrs. J. Shannon	Chico	\$2 00
Embroidered	Mrs. J. Shannon	Chico	\$5 00
Embroidered sofa cushion	Mrs. J. Shannon	Chico	\$2 00
Embroidered sofa cushion	Mrs. J. Shannon	Chico	\$2 00
Embroidered banner	Mrs. J. Shannon	Chico	\$2 00
Embroidered work on net	Mrs. J. Shannon	Chico	\$2 00
Embroidered linen embroidery	Mrs. J. Shannon	Chico	\$2 50
Child's afghan	Mrs. J. Shannon	Chico	\$2 00
Embroidered lambrequin	Mrs. J. Shannon	Chico	\$2 00
Embroidered	Mrs. J. Shannon	Chico	\$2 00
Embroidered carriage afghan	Mrs. J. Shannon	Chico	\$2 00
Embroidered crocheted skirt	Mrs. J. Shannon	Chico	\$2 00
Embroidered tidy	Mrs. J. Shannon	Chico	\$1 00
Embroidered watchchain	Mrs. J. Shannon	Chico	\$1 00
Embroidered slippers	Mrs. J. Shannon	Chico	\$1 00
Embroidered undervests	Mrs. J. Shannon	Chico	\$1 00
Embroidered table mats	Mrs. J. Shannon	Chico	\$1 00
Embroidered pocket	Mrs. J. Shannon	Chico	\$1 00
Embroidered drape	Mrs. J. Shannon	Chico	\$1 00
Embroidered crocheted lace on apron	Mrs. J. Shannon	Chico	\$1 00
Embroidered biscuit cloth	Mrs. J. Shannon	Chico	\$1 00
Embroidered chair roll	Miss Bee Patrick	Chico	\$1 00
Embroidered sofa cushion	Miss Bee Patrick	Chico	\$2 00
Embroidered work on sofa cushion	Miss Bee Patrick	Chico	\$2 00
Embroidered work with point lace	Miss Bee Patrick	Chico	\$2 00
Embroidered handomest toilet set	Miss Bee Patrick	Chico	\$2 00
Embroidered broom holder	Miss Bee Patrick	Chico	\$2 00
Embroidered pillow shams	Mrs. N. E. Bachelor	Chico	\$2 00
Embroidered sofa cushion	Mrs. B. J. Patterson	Chico	\$1 00
Embroidered work	Mrs. B. J. Patterson	Chico	\$2 00
Embroidered picture	Mrs. A. Montgomery	Chico	\$2 50
Embroidered card basket	Mrs. Geo. Snook	Chico	\$1 00
Embroidered lambrequin	Mrs. A. McCormack	Chico	\$2 00
Embroidered clothes bag	Mrs. A. McCormack	Chico	\$1 00
Embroidered case	Mrs. A. McCormack	Chico	\$1 00
Embroidered dress for lady	Mrs. A. McCormack	Chico	\$5 00
Embroidered dressing gown	Mrs. A. McCormack	Chico	\$5 00
Embroidered carriage afghan	Mrs. J. E. Shearer	Chico	\$2 00
Embroidered tidy	Miss Bee Patrick	Chico	\$1 00
Embroidered quilt	Mrs. C. C. Salmon	Chico	\$2 50

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best hand sewing by girl under twelve years	Miss Pearl Pilkey	Chico
Best patch work quilt by girl under twelve years	Miss Pearl Pilkey	Chico
Best silk quilt	Mrs. S. S. Boynton	Oroville
Best specimens of ornamental needle work	Mrs. E. L. Bennett	Chico
Second best exhibit of point lace	Mrs. W. N. Messer	Chico
Best patch work quilt	Miss E. G. Heckart	Chico
Best display of crazy work	Mrs. S. S. Pence	Paradise
Best display of millinery	Mrs. E. G. Edwards	Chico
Best display of feathers	Mrs. E. G. Edwards	Chico
Best display of artificial flowers	Mrs. E. G. Edwards	Chico
Best and handsomest hat for lady	Mrs. E. G. Edwards	Chico
Best and handsomest bonnet for lady	Mrs. E. G. Edwards	Chico
Best fancy lamp shade	Lillian O'Farrell	Chico
Best and largest display of fancy work	Mrs. Wm. East	Chico

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Best set double carriage harness.....	J. G. Murphy	Chico
Best set single harness.....	J. G. Murphy	Chico
Best display of farm harness	J. G. Murphy	Chico
Best display of saddles and bridles.....	J. G. Murphy	Chico
CLASS II.		
Best hand-made horseshoe.....	John Shannon	Chico
Best exhibit of blacksmith work	John Shannon	Chico
Best hand-made linked chain.....	John Shannon	Chico
CLASS IV.		
Best exhibit of pianos made in United States	J. V. Flint	Chico
Best organ made in United States.....	J. V. Flint	Chico
CLASS V.		
Best patent gate.....	W. J. Cox.....	Chico
CLASS VIII.		
Best display of soap made in district.....	Mrs. C. C. Goree	Chico
Best display of hard soap	Mrs. C. C. Goree	Chico
Best display of soft soap	Mrs. C. C. Goree	Chico
CLASS IX.		
Best display of candies made in district	Mrs. E. A. Warren	Chico
CLASS X.		
Best display of dressed marble	J. G. Curtis	Chico
CLASS XI.		
Best collection of minerals	Mrs. B. J. Patterson	Chico
Best display of marine curiosities.....	Mrs. Jay Salisbury	Chico
Best crystallized alum cross	Mrs. Jay Salisbury	Chico

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
ten pounds lard	W. V. Groves	Chico	\$2 00
best	John Shannon	Chico	\$1 00
side bacon	John Shannon	Chico	\$2 00
best	Mrs. J. F. Holland	Chico	\$1 00
exhibit of hams	Mrs. J. F. Holland	Chico	\$2 00
best	John Shannon	Chico	\$1 00
largest variety of wheat	B. F. Allen	Chico	\$10 00
best	John Shannon	Chico	\$5 00
bushel any variety of wheat	John Shannon	Chico	\$5 00
best	J. F. Entler	Chico	\$2 50
variety of German millet.	Mrs. J. H. Guill	Chico	\$1 00
best seed	Mrs. J. H. Guill	Chico	\$1 00
variety of popcorn	Mrs. J. H. Guill	Chico	\$1 00
black barley	J. F. Entler	Chico	\$2 00
CLASS II.			
one half bushel red potatoes	Mrs. J. H. Guill	Chico	\$1 00
one half bushel white potatoes	Jas. Hegan	Chico	\$1 00
one half bushel any other variety of potatoes	Mrs. J. H. Guill	Chico	\$1 00
ten long blood beets	Mrs. J. H. Guill	Chico	\$1 00
six sugar beets	Mrs. J. H. Guill	Chico	\$1 00
one neck squash	Mrs. J. H. Guill	Chico	\$1 00
three yellow fleshed muskmelons	Mrs. J. H. Guill	Chico	\$1 00
one large pumpkin	Mrs. B. J. Patterson	Chico	\$1 00
one half bushel sweet potatoes	Jas. Hegan	Chico	\$1 00
three parsnips	Jas. Hegan	Chico	\$1 00
three carrots	Jas. Hegan	Chico	\$1 00
six turnip beets	Jas. Hegan	Chico	\$1 00
half peck red onions	Jas. Hegan	Chico	\$1 00
half peck white onions	Jas. Hegan	Chico	\$1 00
seven ears sweet corn	Jas. Hegan	Chico	\$1 00
three purple eggplants	Jas. Hegan	Chico	\$1 00
one half peck green beans	Jas. Hegan	Chico	\$1 00
six stalks celery	Jas. Hegan	Chico	\$1 00
variety of tomatoes	Mrs. B. J. Patterson	Chico	\$1 00
one variety of eggplant.	B. F. Allen	Chico	\$1 00
table or collection of vegetables	B. F. Allen	Chico	\$10 00
SPECIAL PREMIUMS.			
most artistic original design			
entirely of California fruits,	B. F. Allen	Chico	\$25 00
flowers and flowers	Mrs. J. H. Guill	Chico	\$15 00
best	F. Elliott	Chico	\$10 00
display of merchandise			
CLASS III.			
collection of foliage plants	Mrs. C. G. Warren	Chico	\$5 00
three rare and new plants	Mrs. C. G. Warren	Chico	\$2 50
two fuchsias in bloom	Mrs. C. G. Warren	Chico	\$2 50
display of plants suitable for conservatory	Mrs. C. G. Warren	Chico	\$2 50
display of roses	Mrs. C. G. Warren	Chico	\$2 50
display of cut bouquets	Miss M. Shannon	Chico	\$2 50
display of cut flowers	Mrs. Geo. Snook	Chico	\$2 50
CLASS V.			
display of bread by unmarried	Miss M. Shannon	Chico	\$5 00
display of bread by married lady	Mrs. Geo. Snook	Chico	\$5 00
display of bread by girl twelve years old	Roda O'Farrell	Chico	\$5 00
display of butter in rolls	Mrs. J. H. Guill	Chico	\$2 50

TRANSACTIONS OF THE
SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Best display of crabapples	Mrs. E. Workey	Chico
Best display of apples	W. V. Groves	Chico
Best twelve varieties apples	W. V. Groves	Chico
Best six varieties pears	Mrs. J. H. Guill	Chico
Second best	W. V. Groves	Chico
Best six varieties apples	Jas. Hegan	Chico
Best display of peaches	J. G. Curtis	Chico
Second best	Jas. Hegan	Chico
Best six varieties peaches	W. V. Groves	Chico
Best display of plums	W. V. Groves	Chico
Second best	Jas. Hegan	Chico
Best display of pomegranates	W. V. Groves	Chico
Best display of green figs	Jas. Hegan	Chico
Second best	W. V. Groves	Chico
Best display of nectarines	Jas. Hegan	Chico
Best general display of fruit	W. V. Groves	Chico
Second best	Mrs. J. H. Guill	Chico
Best display of oranges	Miss C. L. Heckart	Chico
CLASS II.		
Best three jars black currant jelly	Mrs. J. F. Entler	Chico
Best three jars blackberry jelly	Mrs. J. F. Entler	Chico
Best three jars red currant jelly	Mrs. J. F. Holland	Chico
Best three jars gooseberry jelly	Mrs. J. F. Entler	Chico
Best three jars quince jelly	Miss Gertrude Allen	Chico
Best three jars strawberry jelly	Miss C. L. Heckart	Chico
Best three jars strawberry jam	Mrs. J. F. Entler	Chico
Best three jars blackberry jam	Mrs. N. E. Bachelor	Chico
Best three jars raspberry jam	Mrs. N. E. Bachelor	Chico
Best display of brandied peaches	Mrs. N. E. Bachelor	Chico
Best bottle tomato catsup	Mrs. J. F. Holland	Chico
Best display of fruit in jars	Mrs. J. F. Holland	Chico
Second best	Mrs. N. E. Bachelor	Chico
Best display of preserves in jars	Mrs. N. E. Bachelor	Chico
Second best	Mrs. J. F. Holland	Chico
CLASS III.		
Best display of silk cocoons	Mrs. E. Findley	Chico
Best display of reeled silk	Mrs. E. Findley	Chico
Best twenty-five pounds dried apples	W. V. Groves	Chico
Best twenty-five pounds dried pears	W. V. Groves	Chico
Best twenty-five pounds dried peaches	W. V. Groves	Chico
Best twenty-five pounds dried plums	W. V. Groves	Chico
Best ten pounds dried apricots	W. V. Groves	Chico
Best ten pounds dried nectarines	W. V. Groves	Chico
Best ten pounds dried figs	W. V. Groves	Chico
Best display of dried fruits	W. V. Groves	Chico
Second best	James Hegan	Chico
Best twelve varieties table grapes	W. V. Groves	Chico
Best six varieties table grapes	I. L. Compton	Chico
Best three varieties table grapes	James Hegan	Chico
Best and greatest variety of grapes	W. V. Groves	Chico
Best raisin grapes	W. V. Groves	Chico
Best display of sweet cider	W. V. Groves	Chico
Best display of hard cider	W. V. Groves	Chico
Best display of cider vinegar	W. V. Groves	Chico
Best display of wine vinegar	W. V. Groves	Chico
Best display of soft-shell almonds	Mrs. J. H. Guill	Chico
Best display of nuts	Mrs. J. H. Guill	Chico

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Best painting	Mrs. S. S. Boynton	Oroville	\$15 00
Second best	Mrs. S. S. Boynton	Oroville	\$7 50
Best portraiture	Lillian O'Farrell	Chico	\$10 00
Second best	D. H. Woods	Chico	\$5 00
Best painting	Mrs. A. McCormack	Chico	\$5 00
Collection of paintings	Mrs. S. S. Boynton	Oroville	\$10 00
Best painting	Miss Alice Snyder	Chico	\$3 00
Painting on textile fabrics	Lillian O'Farrell	Chico	\$5 00
CLASS II.			
Best drawing	Mrs. B. J. Patterson	Chico	\$5 00
Second best	Mrs. B. J. Patterson	Chico	\$3 00
Best drawing	D. H. Woods	Chico	\$5 00
Second best	D. H. Woods	Chico	\$5 00
CLASS III.			
Best painting, original	Miss Gertrude Allen	Chico	\$5 00
Best painting, copy	Miss Gertrude Allen	Chico	\$2 50
CLASS IV.			
Collection of photographic views	D. H. Woods	Chico	\$10 00
Photographs	Clements & Sprague	Chico	\$5 00

SPEED PROGRAMME.

TUESDAY, AUGUST 26, 1890.

RACE No. 1—TROTTING.

For two-year olds owned in the district. Purse, two hundred and fifty dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wayland W, by Arthur Wilkes; dam, by Wayland Forest	L. H. McIntosh	
Mamie Griffin, by Blackbird; dam, by Flying Morrill	D. M. Reavis	
Lucy B, by Alex Button; dam, Lucy	G. W. Woodard	

SUMMARY.

Wayland W	3 1
Mamie Griffin	1 2
Lucy B	3 2

Time—2:39; 2:34½.

RACE No. 2—TROTTING.

3:00 Class. Free for all. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Frank M, by Priam	T. E. Keating	
Queen of the West, pedigree unknown	J. Green	
Billy Doty, by Brigadier; dam, Maud D	Wm. Doty	

SUMMARY.

Frank M	1 2 1
Billy Doty	2 1 1
Queen of the West	3 3 3

Time—2:44½; 2:39½; 2:39½; 2:35; 2:39.

RACE No. 3—RUNNING.

Free for all. Purse, two hundred dollars. Three fourths of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wild Robin, by Keystone; dam, by Rifleman	J. G. Sohm	
Oakdale, by Partisan; dam, by Specter	W. M. Murry	
Mohawk, by Norfolk; dam, Irene Harding	Dennison Bros.	
Leatherwood, by Ironwood; dam, Mollie B	H. Willet	
Rosebud, by Jim Brown; dam, Rosemary	Tietjens & Watson	
Lucky Dan, by Compromise; dam, Frankie Devine	H. Phillips	

SUMMARY.

Leatherwood	1 1
Rosebud	2 2
Lucky Dan	4 3
Oakdale	3 dis.
Mohawk	5 dis.
Wild Robin	6 dis.

Time—1:17; 1:17.

WEDNESDAY, AUGUST 27, 1890.

RACE No. 4—TROTTING.

For three-year olds owned in the district. Purse, three hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Silver King, by Jim Mulvenna; dam, by Silver	G. W. Woodard	Woodland.
Actor, by Prompter; dam, by Sultan	De Gomez & Goddard	Auburn.

SUMMARY.

Silver King	1 1 1
Actor	2 2 2

Time—2:48; 2:43½; 2:43.

RACE No. 5—PACING.

For horses without a record. Free for all. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Tolman, by Frank Tolman; dam, by	S. H. Montgomery	Chico.
Norton, by Tilton Almont; dam, unknown	Thos. Norton	Sacramento.
Minnie K, by Billy Hayward; dam, unknown	T. P. Hendricks	Chico.
W G, by Adonis; dam, by St. Clair	C. W. Knox	Oakland.
	C. W. Goddard	Sacramento.

SUMMARY.

C W G	1 1 2 1
Lotia	2 2 1 2
Lady Tolman	dis.
Minnie K	dis.
Tom Norton	dis.

Time—2:26½; 2:27; 2:29; 2:31.

RACE No. 6—TROTTING.

3:00 Class. Free for all. Purse, six hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Carr's Mambrino; dam, Flora	Jesse D. Carr	Salinas.
Coligny; dam, by Casserly		

SUMMARY.

Maud H 1 1
 Frank B 2 2
 Time—2:31; 2:31½; 2:37.

THURSDAY, AUGUST 28, 1890.

RACE No. 7—TROTTING.

2:35 Class. Free for all. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Dinah, by Little Billy; dam, Tarian mare.....	S. K. Trefry.....	.....
Mattie Solomon, by Director; dam, by Black-bird.....	D. M. Reavis.....	.....
Ed Biggs, by Brigadier; dam, thoroughbred.....	M. Biggs.....	.....
Stranger, by Tilton Almont; dam, Jessie.....	W. W. Marshall.....	.....

SUMMARY.

Stranger 1 2 1 1
 Dinah 2 1 2 1
 Ed Biggs 3 3 3 3
 Mattie Solomon 4 4 4 4
 Time—2:29½; 2:27½; 2:27½; 2:27½; 2:26½.

RACE No. 8—MIXED TROTTING AND PACING.

Special race for named horses. Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Johnny Hayward.....	L. Levy.....	.....
Rabe.....	G. S. Nixon.....	.....
Little Hopes.....	T. J. Powers.....	.....
Sam Lewis.....	S. P. Sweeney.....	.....

SUMMARY.

Johnny Hayward 2 1 2 1
 Sam Lewis 1 4 3 3
 Little Hopes 3 2 3 3
 Rabe 4 3 1 1
 Time—2:33; 2:29; 2:29; 2:27½; 2:27½.

RACE No. 9—RUNNING.

Purse, two hundred dollars. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mohawk, by Keystone; dam, by Rifleman.....	Dennison Bros. ....	.....
Jack the Ripper, by Captain Jack; dam, Jennie Mack.....	H. Willets.....	.....
Gold Dust, pedigree unknown.....	J. C. Moore.....	.....
R H, by Bayswater.....	R. H. Newton.....	.....
Minnie Bryden, by Norfolk; dam, Dutch Girl.....	W. F. Gates.....	.....
Joker, by Joe Hooker; dam, by imp. Hercules.....	J. F. King.....	.....

SUMMARY.

Jack the Ripper..... 1 1
 Joker..... 2 2
 Mohawk..... 3 3
 Time—0:50; 0:50.

RACE No. 10—RUNNING.

Purse, two hundred dollars. One mile dash.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Johnson, by Nimrod; dam, Mollie B.....	H. Willets.....	Willets.
Douglas, by Leinster; dam, Lily Simpson.....	Dennison Bros.	Sacramento.
by Norfolk; dam, Sister to Lottery.....	A. Simpson.....	Moore's Station.
by Jim Brown; dam, Rosemary.....	Tietjens & Watson.....	Sacramento.
by Flood; dam, imp. Amelia.....	W. M. Murry.....	Sacramento.

SUMMARY.

Leland..... 1
 Rosebud..... 2
 Dave Douglas..... 3
 Time—1:44½.

FRIDAY, AUGUST 29, 1890.

RACE No. 11—TROTTING.

2:40 Class. For horses in the district. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Dave Hill, Jr.....	T. C. Snider.....	Sacramento.
by Brigadier; dam, Maud D.....	Wm. Doty.....	Colusa.
by Tilton Almont.....	John Spurgeon.....	Chico.
by Singleton; dam, Kate.....	L. Daniels.....	Chico.

SUMMARY.

Violetie 1 1 1
 Wm Doty 3 2 2
 Kathleen 2 4 4
 Lena B. 4 3 3
 Time—2:41; 2:47; 2:44½.

RACE No. 12—TROTTING.

Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Tilton Almont; dam, Nippee.....	W. R. Merrill.....	Willows.
by Adonis; dam, by Ethan Allen.....	M. Biggs, Jr.....	Oroville.
by Alex. Button; dam, Dolly.....	C. B. Bigelow.....	Woodland.
by Sweeney; dam, Venus.....	C. Thornquest.....	Oakland.

SUMMARY.

Annie E	1
St. Lucas	3
Laura Z	2
Cupid	4

Time—2:32; 2:32; 2:36.

RACE No. 13—RUNNING.

Purse, two hundred and fifty dollars. Mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.
Leatherwood, by Ironwood; dam, Mollie B...	H. Willet
Lucky Dan, by Compromise; dam, Frankie Devine	A. Phillips
Leland, by Flood; dam, imp. Amelia	W. M. Murry
Dave Douglas, by Leinster; dam, Lily Simpson.	Dennison Bros.

SUMMARY.

Dave Douglas	4
Leatherwood	1
Lucky Dan	2
Leland	3

Time—1:45½; 1:45; 1:46.

SATURDAY, AUGUST 30, 1890.

RACE No. 14—TROTTING.

2:27 Class. Purse, seven hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.
Johnny Hayward, by Poscora Hayward	L. Levy
Sargent	G. F. Johnson
Maud H, by Carr's Mambrino; dam, Flora	J. D. Carr
Frank M, by Priam	T. E. Keating
Idaho Patchen	J. E. Abbott
Vic H, by Blackbird; dam, Ellen Swigert	D. M. Reavis

SUMMARY.

Frank M	1
Vic H	2
Johnny Hayward	4
Sargent	3

Time—2:19; 2:18; 2:19½; 2:18; 2:20½.

RACE No. 15—PACING.

2:25 Class. Purse, six hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.
Gerster	C. Thornquest
Lotta, by Singleton; dam, Ophir	T. P. Hendricks
C W G	C. W. Goddard
Haverly	E. Downer
Geo. Wapple, by Brigadier	Chas. Sherman
John L	W. W. Bates
Costillo, by Echo; dam, Bessie Turner	S. C. Tryon
Acrobat, by Sterling; dam, Madam Baker	N. N. Craig

SUMMARY.

C W G	1
Acrobat	6
Haverly	8

Time—2:28; 2:27; 2:24; 2:22½.

TRANSACTIONS

OF THE

FOURTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Sonoma and Marin.

REPORT.

DECEMBER 1, 1890.

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Fourth District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

THOMAS MACLAY,
Secretary.

OFFICERS OF THE ASSOCIATION.

J. H. WHITE.....
THOMAS MACLAY.....
PETALUMA SAVINGS BANK.....

DIRECTORS.

J. H. WHITE.....
F. C. De LONG.....
H. MEACHAM.....
ROBERT CRANE.....
P. J. SHAFTER.....
WM. ZARTMAN.....
A. L. WHITNEY.....
S. F. ALLEN.....

RECEIPTS AND EXPENDITURES.

Receipts.

State appropriation.....	\$3,000 00	
Entrances.....	5,410 00	
Entrances for Futurity Stake.....	190 00	
Entrances from meeting of 1886.....	60 00	
Entrances from meeting of 1889.....	144 00	
Entrances collected for National Trotting Association.....	140 00	
Entrances collected for Napa Trotting Association.....	60 00	
City of Petaluma, for special police.....	100 00	
City of Petaluma, for city taxes.....	114 35	
W. P. Fine, for rent of grounds for 1889-90.....	225 00	
W. P. Fine, for new harrow.....	25 00	
W. Middagh, part payment of rent of grounds for 1890-91.....	200 00	
Sale of old junk.....	50	
J. H. White, for special premium for bread.....	20 00	
Wagon sold.....	12 50	
Restaurant under grand stand.....	9 35	
Petaluma Street Railway Company.....	111 45	
Ticket sales.....	3,671 50	
Grand stand and club-house.....	1,237 85	
Avilion at night.....	379 95	
Track licenses.....	20 00	
Privileges.....	2,678 40	
Warrant No. 148, of 1889, having been issued by mistake.....	13 50	
December 1, 1890—Overdraft.....		\$17,823 35
		3,884 96
		<u>\$21,658 31</u>

Expenditures.

Balance as per last report.....		\$3,768 14
Interest.....	\$8,737 50	
Track premiums.....	1,236 00	
Avilion premiums.....	859 00	
General expenses.....	4,356 49	
Entrances refunded.....	150 00	
Entrances collected for the National Trotting Association.....	140 00	
Entrances collected for the Napa Trotting Association.....	60 00	
Permanent improvements.....	1,350 54	
State and county taxes.....	145 19	
Wagon license.....	100 00	
Interest on overdraft.....	150 10	
Interest on note.....	350 00	
Insurance.....	115 00	
Amounts carried forward.....	\$17,749 82	\$3,768 14

Amounts brought forward.....		\$17,749 82
Paid warrant of 1889, No. 47.....	\$5 00	
Paid warrant of 1889, No. 62.....	1 00	
Paid warrant of 1889, No. 147.....	2 50	
Paid warrant of 1889, No. 148.....	13 50	
Paid warrant of 1889, No. 150.....	14 95	
Paid warrant of 1889, No. 151.....	2 40	
Paid warrant of 1889, No. 152.....	60	
Paid warrant of 1889, No. 154.....	197 40	
		231 55

Less warrant No. 229 of 1889, remaining in book unpaid

1890—December 1—Overdraft.....

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—THOROUGHBRED HORSES—			
STALLIONS.			
Boys, one year old.....	J. Biggins.....	Sonoma.....	\$4 00
MARES.			
Lamb, four years old and over.....	J. B. Hinkle.....	Petaluma.....	\$10 00
Furnell, four years old and over.....	J. Biggins.....	Sonoma.....	\$5 00
CLASS II—STANDARD TROTTERS—			
STALLIONS.			
four years old and over.....	Wilfred Page.....	Penn's Grove.....	\$20 00
four years old and over.....	Wilfred Page.....	Penn's Grove.....	\$7 00
three years old.....	J. A. Box.....	S. Los Guillicos.....	\$12 00
two years old.....	R. Crane.....	Petaluma.....	\$7 00
De Turk, one year old.....	R. Crane.....	Petaluma.....	\$4 00
under one year.....	J. H. Wiseacre.....	Geyserville.....	\$3 00
Jr., and three colts.....	Con. Shay.....	Santa Rosa.....	\$15 00
MARES.			
four years old and over.....	P. J. Shafter.....	Olema.....	\$10 00
four years old and over.....	R. Crane.....	Petaluma.....	\$5 00
three years old.....	W. P. Edwards.....	Petaluma.....	\$8 00
Diamond, two years old.....	F. C. De Long.....	Novato.....	\$5 00
one year old.....	R. S. Brown.....	Petaluma.....	\$4 00
one year old.....	Wilfred Page.....	Penn's Grove.....	\$2 00
under one year.....	R. Crane.....	Petaluma.....	\$3 00
D and two colts.....	R. Crane.....	Petaluma.....	\$10 00
CLASS III—ROADSTERS—STALLIONS.			
four years old and over.....	W. P. Fine.....	Petaluma.....	\$20 00
four years old and over.....	D. Mizner.....	Petaluma.....	\$7 00
three years old.....	P. J. Shafter.....	Olema.....	\$12 00
one year old.....	J. H. White.....	Petaluma.....	\$4 00
one year old.....	Wilfred Page.....	Penn's Grove.....	\$2 00
under one year.....	Harris & Knapp.....	Fulton.....	\$5 00
under one year.....	D. Mizner.....	Petaluma.....	\$1 00
and three colts.....	D. Mizner.....	Petaluma.....	\$15 00
MARES.			
Manche, four years old and over.....	H. B. Starr.....	Napa.....	\$10 00
four years old and over.....	J. R. Rose.....	Lakeville.....	\$5 00
two years old.....	Harris & Knapp.....	Fulton.....	\$5 00
Franklin, two years old.....	J. H. White.....	Lakeville.....	\$2 00
one year old.....	Harris & Knapp.....	Fulton.....	\$4 00
one year old.....	J. Biggins.....	Sonoma.....	\$2 00
under one year.....	D. Mizner.....	Petaluma.....	\$3 00
and two colts.....	Harris & Knapp.....	Fulton.....	\$10 00
CLASS IV—CARRIAGE, SADDLE, AND			
GENTS' ROADSTERS.			
Quail and Princess, to pole.....	J. H. White.....	Lakeville.....	\$10 00
to buggy.....	J. Grimes.....	Petaluma.....	\$5 00
to saddle.....	J. Sartori.....	Petaluma.....	\$4 00
to saddle.....	J. Sartori.....	Petaluma.....	\$2 00
CLASS V—ROMANS AND OTHER FRENCH			
HEAVY BREEDS—STALLIONS.			
four years old and over.....	J. P. Rodehaver.....	Petaluma.....	\$20 00
four years old and over.....	Theo. Skillman.....	Petaluma.....	\$7 00

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Duke de Normandy, three years old	J. R. Rose	Lakeville
Duke de Norailles, three years old	J. R. Rose	Lakeville
Remus, one year old	W. K. Hill	Petaluma
Tobie, one year old	R. Crane	Petaluma
Pat Henley, under one year	R. Crane	Petaluma
MARES.		
Queen of the Valley, four years old and over	P. Henley	Petaluma
Norine, four years old and over	J. R. Rose	Lakeville
Black Bess, three years old	W. K. Hill	Petaluma
Duchess of Nantes, three years old	J. R. Rose	Lakeville
Right Sort Dam, two years old	P. Henley	Petaluma
Nandienne, two years old	J. R. Rose	Lakeville
Lucy, one year old	W. K. Hill	Petaluma
Queen of the Valley and two colts	P. Henley	Petaluma
CLASS VI—CLYDESDALE AND OTHER ENGLISH DRAFT BREEDS—STALLIONS.		
Buffalo Bill, four years old and over	Denman & McNear	Petaluma
Hero, four years old and over	Theo. Skillman	Petaluma
Pointsman, Jr., three years old	Denman & McNear	Petaluma
Scotty, three years old	R. H. Crane	Petaluma
Edward, two years old	Denman & McNear	Petaluma
Lothair 4th, two years old	W. V. Griffith	Geyserville
California Sam, one year old	W. V. Griffith	Geyserville
Druid, one year old	Denman & McNear	Petaluma
Bally, under one year	R. H. Crane	Petaluma
—, under one year	A. Fox	Petaluma
Morning Star and three colts	Clydesdale Horse Co.	Petaluma
Captain Sefton and three colts	A. Fox	Petaluma
MARES.		
Darling, four years old and over	Denman & McNear	Petaluma
Empress, four years old and over	Denman & McNear	Petaluma
Dolly, three years old	E. R. Charles	Petaluma
Kitty Clyde, three years old	P. Henley	Petaluma
Blossom 3d, two years old	Denman & McNear	Petaluma
Belle, under one year	Denman & McNear	Petaluma
—, under one year	E. W. Davis	Penn's Grove
Blossom 2d and two colts	Denman & McNear	Petaluma
CLASS VII—GENERAL PURPOSES—STALLIONS.		
Black Domino, four years old and over	Theo. Skillman	Petaluma
Dick, four years old and over	J. Grimes	Petaluma
MARES.		
Belle, four years old and over	E. W. Davis	Penn's Grove

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CATTLE—CLASS IX—SHORTHORNS—BULLS.		
Marin Duke, three years old and over	J. Lynch	Petaluma
Mountain Chief, three years old and over	J. Lynch	Petaluma
Baden Duke 26th, two years old	J. E. Lucas	San Rafael
Orico, two years old	J. Lynch	Petaluma
Victor, one year old	Victor Piezzi	Santa Rosa
Royal Sonoma, one year old	J. Lynch	Petaluma
Cherry Plum, under one year	Victor Piezzi	Santa Rosa
Alameda Duke, under one year	J. E. Lucas	San Rafael

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
cows.			
Richardson, three years old and over	J. Lynch	Petaluma	\$12 00
Pink 3d, three years old and over	M. D. Hopkins	Petaluma	\$6 00
—, two years old	J. Lynch	Petaluma	\$7 00
—, two years old	J. E. Lucas	San Rafael	\$4 00
—, one year old	J. Lynch	Petaluma	\$5 00
Queen, one year old	J. Lynch	Petaluma	\$2 00
Richardson, under one year	J. Lynch	Petaluma	\$3 00
—, under one year	Victor Piezzi	Santa Rosa	\$1 00
X—HERDS AND SWEEPSTAKE (SHORTHORNS).			
Whack and family	M. D. Hopkins	Petaluma	\$15 00
Duke and family	J. Lynch	Petaluma	R. R.
Duke 2d, bull	J. E. Lucas	San Rafael	\$8 00
Whack, bull	M. D. Hopkins	Petaluma	R. R.
Warren, cow	M. D. Hopkins	Petaluma	\$5 00
—, cow	J. E. Lucas	San Rafael	R. R.
CLASS IX—RED POLLS—BULLS.			
—, three years old and over	Meacham & Fritsch	Stony Point	\$20 00
—, three years old and over	Meacham & Fritsch	Stony Point	\$7 00
—, one year old	Meacham & Fritsch	Stony Point	\$7 00
—, one year old	Meacham & Fritsch	Stony Point	\$3 00
—, under one year	Meacham & Fritsch	Stony Point	\$3 00
—, under one year	Meacham & Fritsch	Stony Point	\$1 00
cows.			
—, three years old and over	Meacham & Fritsch	Stony Point	\$12 00
—, three years old and over	Meacham & Fritsch	Stony Point	\$6 00
—, two years old	Meacham & Fritsch	Stony Point	\$7 00
—, two years old	Meacham & Fritsch	Stony Point	\$4 00
—, one year old	Meacham & Fritsch	Stony Point	\$5 00
—, under one year	Meacham & Fritsch	Stony Point	\$3 00
—, under one year	Meacham & Fritsch	Stony Point	\$1 00
CLASS XVII—DEVONS—BULLS.			
—, three years old and over	J. R. Rose	Lakeville	\$20 00
—, three years old and over	J. R. Rose	Lakeville	\$10 00
—, two years old	J. R. Rose	Lakeville	\$5 00
—, one year old	J. R. Rose	Lakeville	\$7 00
—, one year old	J. R. Rose	Lakeville	\$3 00
—, under one year	J. R. Rose	Lakeville	\$3 00
cows.			
—, three years old and over	J. R. Rose	Lakeville	\$12 00
—, three years old and over	J. R. Rose	Lakeville	\$6 00
—, two years old	J. R. Rose	Lakeville	\$7 00
—, two years old	J. R. Rose	Lakeville	\$4 00
—, one year old	J. R. Rose	Lakeville	\$5 00
—, one year old	J. R. Rose	Lakeville	\$2 00
—, under one year	J. R. Rose	Lakeville	\$3 00
—, under one year	J. R. Rose	Lakeville	\$1 00
CLASS XIX—HOLSTEINS—BULLS.			
—, three years old and over	Mrs. F. H. Burke	Menlo Park	\$20 00
—, three years old and over	J. H. White	Lakeville	\$7 00
—, two years old	J. H. White	Lakeville	\$10 00
—, two years old	J. H. White	Lakeville	\$5 00
—, one year old	Mrs. F. H. Burke	Menlo Park	\$7 00
—, Exception, one year old	J. H. White	Lakeville	\$3 00
—, under one year	Mrs. F. H. Burke	Menlo Park	\$3 00
—, under one year	J. H. White	Lakeville	\$1 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
COWS.		
Annemie, three years old and over	J. H. White	Lakeville
Winifredalla, three years old and over	J. H. White	Lakeville
Aaggie Lelia 2d's Precious, two years old	Mrs. F. H. Burke	Menlo Park
Lucy Lyle, two years old	J. H. White	Lakeville
Tule Jim, one year old	J. H. White	Lakeville
Lorietta, one year old	Mrs. F. H. Burke	Menlo Park
Ocala 2d, under one year	J. H. White	Lakeville
Thissa Lass, under one year	Mrs. F. H. Burke	Menlo Park
CLASS XX—HERDS AND SWEEPSTAKE (HOLSTEINS).		
Oro Blanco and family	J. H. White	Lakeville
King of Menlo and family	Mrs. F. H. Burke	Menlo Park
King of Menlo, bull	Mrs. F. H. Burke	Menlo Park
Huachuca, bull	J. H. White	Lakeville
Annemie, cow	J. H. White	Lakeville
Winifreda, cow	J. H. White	Lakeville
CLASS XXI—JERSEYS AND GUERNSEYS—BULLS.		
Captain, three years old and over	G. D. Campbell	Petaluma
Wildwood, three years old and over	Hall Bros.	Petaluma
Prince Arthur, two years old	J. R. Denman	Petaluma
William 3d, two years old	W. Wilder	Petaluma
Victor, one year old	Hall Bros.	Petaluma
Captain 2d, under one year	G. D. Campbell	Petaluma
COWS.		
Lark, three years old and over	G. D. Campbell	Petaluma
Coraline, three years old and over	G. D. Campbell	Petaluma
Daisy, two years old	G. D. Campbell	Petaluma
Sarah, two years old	G. D. Campbell	Petaluma
Norma, one year old	Hall Bros.	Petaluma
Mariposa 2d, one year old	G. D. Campbell	Petaluma
Coraline 3d, under one year	W. Wilder	Petaluma
Lark 2d, under one year	G. D. Campbell	Petaluma
CLASS XXII—HERDS AND SWEEPSTAKE (JERSEYS AND GUERNSEYS).		
Captain and family	G. D. Campbell	Petaluma
Wildwood and family	Hall Bros.	Petaluma
Captain, bull	G. D. Campbell	Petaluma
Lark, cow	G. D. Campbell	Petaluma
Coraline 3d, cow	G. D. Campbell	Petaluma
CLASS XXV—GRADED CATTLE—COWS.		
—, three years old and over	J. H. White	Lakeville
Beauty, two years old	Meacham & Fritsch	Stony Point
Handsome, two years old	Meacham & Fritsch	Stony Point
Fire Fly, one year old	Meacham & Fritsch	Stony Point
Spark, one year old	Meacham & Fritsch	Stony Point
Ruby, under one year	Meacham & Fritsch	Stony Point
—, under one year	J. H. White	Lakeville

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.
SHEEP—CLASS XXVII—SPANISH MERINOS.		
Best three ewes, two years old and over	J. R. Denman	Petaluma
Second best	W. K. Hill	Petaluma
Best three ewes, one year old	J. R. Denman	Petaluma
Best three ewe lambs	W. K. Hill	Petaluma
Second best	J. R. Denman	Petaluma

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS XXXIV—SOUTH DOWNS.			
—, two years old and over	R. H. Crane	Petaluma	\$6 00
—, best	R. H. Crane	Petaluma	\$3 00
—, one year old	R. H. Crane	Petaluma	\$5 00
—, three ram lambs	R. H. Crane	Petaluma	\$4 00
—, best	R. H. Crane	Petaluma	\$2 00
—, ewes, two years	R. H. Crane	Petaluma	\$5 00
—, best	R. H. Crane	Petaluma	\$2 50
—, ewes, one year old	R. H. Crane	Petaluma	\$4 00
—, best	R. H. Crane	Petaluma	\$2 00
—, three ewe lambs	R. H. Crane	Petaluma	\$2 00
—, best	R. H. Crane	Petaluma	\$1 00
CLASS XXXV—SHROPSHIRE DOWNS.			
Duke of California, two years old	J. E. Lucas	San Rafael	\$6 00
—, best	R. H. Crane	Petaluma	\$5 00
—, one year old	J. E. Lucas	San Rafael	\$4 00
—, three ram lambs	R. H. Crane	Petaluma	\$5 00
—, best	J. E. Lucas	San Rafael	\$2 50
—, ewes, two years old and over	R. H. Crane	Petaluma	\$4 00
—, best	J. E. Lucas	San Rafael	\$2 00
—, ewes, one year old	J. E. Lucas	San Rafael	\$2 00
—, best	J. E. Lucas	San Rafael	\$2 00
—, ewe lambs	J. E. Lucas	San Rafael	\$2 00
CLASS XXXVIII—BERKSHIRES—BOARS.			
Byron (22,001), one year old and over	J. E. Lucas	San Rafael	\$6 00
Byron 2d, six months old	J. E. Lucas	San Rafael	\$3 00
—, six months old	J. E. Lucas	San Rafael	\$1 00
SOWS.			
—, one year old and over	J. E. Lucas	San Rafael	\$5 00
—, best	J. E. Lucas	San Rafael	\$3 00
—, six months old	J. E. Lucas	San Rafael	\$1 00
—, five of her family	J. E. Lucas	San Rafael	\$5 00
CLASS XXXIX—POLAND-CHINA.			
—, one year old and over	L. L. Cannon	Penn's Grove	\$6 00
—, best	G. C. Clark	Penn's Grove	\$3 00
—, six months old	Theo. Skillman	Petaluma	\$3 00
—, one year old and over	G. C. Clark	Penn's Grove	\$5 00
—, best	G. C. Clark	Penn's Grove	\$2 00
—, six months old	R. H. Crane	Petaluma	\$3 00
—, five of her family	Theo. Skillman	Petaluma	\$5 00
—, best	G. C. Clark	Penn's Grove	\$2 00
CLASS XLI.			
—, Bantam fowls	R. H. Crane	Petaluma	\$2 00
—, best	A. F. Killam	Petaluma	\$1 00
CLASS XLII.			
—, Dark Brahma fowls	A. F. Killam	Petaluma	\$2 00
CLASS XLIII.			
—, Light Brahma fowls	A. Armstrong	Petaluma	\$2 00
—, best	R. H. Crane	Petaluma	\$1 00
CLASS XLIV.			
—, Buff Cochon fowls	A. Armstrong	Petaluma	\$2 00
—, best	A. F. Killam	Petaluma	\$1 00
CLASS XLV.			
—, White Cochon fowls	A. F. Killam	Petaluma	\$2 00
CLASS XLVI.			
—, Dominique fowls	A. F. Killam	Petaluma	\$2 00

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS XLVII.		
Best pair Black-breasted Game fowls	R. Crane	Petaluma
Second best	O. Elmore	Petaluma
CLASS XLVIII.		
Best pair Brown Red Game fowls	V. Brown	Petaluma
CLASS XLIX.		
Best pair Duck-Wing fowls	R. Crane	Petaluma
CLASS LI.		
Best pair Golden Hamburg fowls	W. D. Freeman	Petaluma
CLASS LIII.		
Best pair Houdan fowls	W. D. Freeman	Petaluma
Second best	A. Armstrong	Petaluma
CLASS LV.		
Best pair Brown Leghorn fowls	A. Armstrong	Petaluma
Second best	R. H. Crane	Petaluma
CLASS LVI.		
Best pair White Leghorn fowls	A. Armstrong	Petaluma
CLASS LVII.		
Best pair Plymouth Rock fowls	A. Armstrong	Petaluma
Second best	A. Armstrong	Petaluma
CLASS LVIII.		
Best pair Black Spanish fowls	A. Armstrong	Petaluma
CLASS LXI.		
Best pair Wyandotte fowls	W. D. Freeman	Petaluma
Second best	W. D. Freeman	Petaluma
CLASS LXIII.		
Best pair Pekin ducks	A. F. Killam	Petaluma
Second best	A. F. Killam	Petaluma
CLASS LXVII.		
Best pair Toulouse geese	R. H. Crane	Petaluma
Second best	A. Armstrong	Petaluma

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS LXIX—GRAIN, FLOUR, ETC.		
Best sheaf of barley	J. R. Denman	Petaluma
Best sack common barley	W. D. Freeman	Petaluma
Best ten ears corn	J. A. Story	Petaluma
Best ten ears corn on stalk	J. A. Story	Petaluma
Best sack black oats	W. D. Freeman	Petaluma
Best sack white oats	W. D. Freeman	Petaluma
Best sheaf of wheat	P. Henley	Petaluma
Best sack wheat of each variety	W. D. Freeman	Petaluma
Best exhibit of grain, four varieties	W. D. Freeman	Petaluma
Best sheaf of each variety	P. Henley	Petaluma
CLASS LXX—VEGETABLES, ROOTS, ETC.		
Best exhibit of shelled beans	Rollin Andrews	Petaluma
Best exhibit of six blood beets	H. Gaston	Petaluma
Best exhibit of six sugar beets	J. W. Putnam	Petaluma
Best exhibit of cabbage	S. Q. Barlow	Petaluma
Best exhibit of carrots	J. W. Putnam	Petaluma
Best exhibit of mangel-wurzels	J. W. Putnam	Petaluma

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Best exhibit of onions	C. L. Charles	Petaluma	\$1 00
Best exhibit of pieplant	R. Andrews	Petaluma	\$1 00
Best exhibit of potatoes, one variety	P. Mullaly	Petaluma	\$2 00
Best exhibit of potatoes, five varieties	P. Mullaly	Petaluma	\$5 00
Best exhibit of pumpkins	A. Armstrong	Petaluma	\$2 00
Best exhibit of rutabagas	W. D. Freeman	Petaluma	\$1 00
Best exhibit of squashes	C. D. Graw	Petaluma	\$2 00
Best exhibit of turnips	R. Andrews	Petaluma	\$1 00
Best exhibit of products raised on one acre by one person	R. Andrews	Petaluma	\$20 00
CLASS XXII—FRUITS, GRAPES, NUTS, ETC.			
Best exhibit of six apples, one variety	S. Q. Barlow	Petaluma	\$2 00
Best exhibit of apples, six varieties	Jno. Merritt	Petaluma	\$4 00
Best exhibit of foreign grapes	Jno. Merritt	Petaluma	\$3 00
Best and best exhibit of grapes raised in one vineyard	C. L. Charles	Petaluma	\$20 00
Best exhibit of cantaloupes	Jno. Merritt	Petaluma	\$10 00
Best exhibit of watermelons	A. Armstrong	Petaluma	\$1 00
Best exhibit of nectarines	C. L. Charles	Petaluma	\$2 00
Best exhibit of six peaches, one variety	F. F. Ennis	Petaluma	\$1 00
Best exhibit of peaches, five varieties	R. Andrews	Petaluma	\$2 00
Best exhibit of six pears, one variety	R. Andrews	Petaluma	\$4 00
Best exhibit of pears, six varieties	R. Andrews	Petaluma	\$2 00
Best exhibit of peanuts	R. Andrews	Petaluma	\$2 00
Best exhibit of plums, one variety	J. R. Doss	Petaluma	\$2 00
Best exhibit of plums, five varieties	F. F. Ennis	Petaluma	\$4 00
Best exhibit of prunes, one variety	A. P. Martin	Petaluma	\$2 00
Best exhibit of prunes, three varieties	E. Parks	Petaluma	\$4 50
Best exhibit of quinces	C. S. Gibson	Petaluma	\$2 00
Best and best exhibit of fruits raised in one orchard	A. P. Martin	Petaluma	\$20 00
Best exhibit of fruits	F. F. Ennis	Petaluma	\$10 00
CLASS XXIII—PRESERVED FRUITS, ETC.			
Best exhibit of sun-dried apples, three varieties	C. W. Lewis	Petaluma	\$2 00
Best exhibit of sun-dried plums, three varieties	E. Parks	Petaluma	\$2 00
Best exhibit of sun-dried fruits, five varieties	E. Parks	Petaluma	\$5 00
Best exhibit of catsup	Mrs. A. H. Patty	Petaluma	\$1 50
Best exhibit of jellies	Mrs. W. P. Hall	Petaluma	\$2 50
Best exhibit of pickles	Mrs. L. G. Nay	Petaluma	\$2 00
Best exhibit of preserves, three varieties	Mrs. L. G. Nay	Petaluma	\$2 00
Best exhibit of domestic canned fruits, three varieties	Mrs. A. H. Patty	Petaluma	\$4 00
Best exhibit of goods from any cannery in the district	Petaluma F. P. Co.	Petaluma	Dip. & \$25
CLASS XXIV—BUTTER, CHEESE, HAMS, LARD, AND HONEY.			
Best exhibit of three sides of bacon	R. Crane	Petaluma	\$2 00
Best exhibit of fresh butter, ten pounds	Jas. Bloom	Petaluma	Dip. & \$10
Best exhibit of new cheese	G. W. Ormsby	Petaluma	\$5 00
Best exhibit of cheese one year old and over	Hall Bros.	Petaluma	\$3 00
Best exhibit of cheese one year old and over	J. R. Jewell	Petaluma	\$1 00
Best exhibit of hams, three or more	R. Crane	Petaluma	\$2 00
Best and best exhibit of cheese, not from six	J. R. Jewell	Petaluma	\$5 00
CLASS XXV—WINES, CIDER, ALE, ETC.			
Best exhibit of blackberry brandy	Mrs. A. H. Patty	Petaluma	\$2 00
Best exhibit of blackberry cordial	Mrs. A. H. Patty	Petaluma	\$2 00

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS LXXVI—TOWNSHIP EXHIBITS.		
Best exhibit	Petaluma Township.	
Second best	Vallejo Township.	

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS LXXVII—AGRICULTURAL IMPLEMENTS, HARDWARE, ETC.		
Best churn	Bauer & Co.	Petaluma.
Best clod crusher	Bauer & Co.	Petaluma.
Best hay cutter	Bauer & Co.	Petaluma.
Best cultivator	Bauer & Co.	Petaluma.
Best fruit drier (model)	C. W. Lewis	Petaluma.
Best harrow	Bauer & Co.	Petaluma.
Best incubator	L. C. Byce	Petaluma.
Best cider mill and press	Bauer & Co.	Petaluma.
Best fanning mill	Bauer & Co.	Petaluma.
Best windmill	Air Motor Co.	San Francisco.
Best gang plow	Bauer & Co.	Petaluma.
Best sidehill plow	Bauer & Co.	Petaluma.
Best horse rake	Bauer & Co.	Petaluma.
CLASS LXXVIII—CARRIAGES, BUGGIES, AND WAGONS.		
Best carriage painting	H. Pinner	Petaluma.
Best carriage trimming	C. Northrup & Co.	Petaluma.
Best spring wagon	R. Spottswood & Son	Petaluma.
Best exhibit of carriages, buggies, and wagons	R. Spottswood & Son	Petaluma.
CLASS LXXIX—SADDLERY AND HARNESS.		
Best exhibit of horse boots	C. Northrup & Co.	Petaluma.
Best exhibit of light double harness	C. Northrup & Co.	Petaluma.
Best exhibit of light single harness	C. Northrup & Co.	Petaluma.
Best exhibit of work double harness	C. Northrup & Co.	Petaluma.
Best exhibit of saddle	C. Northrup & Co.	Petaluma.
Best exhibit of saddlery	C. Northrup & Co.	Petaluma.
CLASS LXXX—MISCELLANEOUS EXHIBITS OF DISTRICT MANUFACTURES AND HANDIWORK.		
Best exhibit of bookbinding	J. A. Cowen	Petaluma.
Best exhibit of boots and shoes	J. A. Palmer	Petaluma.
Best exhibit of brooms	A. Doty	Petaluma.
Best exhibit of chairs	Ellsworth & Son	Petaluma.
Best exhibit of brass finishing	Mrs. L. C. Byce	Petaluma.
Best exhibit of furniture	Ellsworth & Son	Petaluma.
Best exhibit of gate (model)	L. J. Johnson	Petaluma.
Best exhibit of turning wood	C. W. Lewis	Petaluma.
Best exhibit of California woods, polished	Mrs. L. C. Byce	Petaluma.
Best and most useful invention (model)	Sales & Holmes	Petaluma.
Best exhibit of fireworks	E. S. Squires	Petaluma.
CLASS LXXXI—SWEEPSTAKE.		
Best exhibit of agricultural implements	Bauer & Co.	Petaluma.
Best exhibit of furniture	Ellsworth & Son	Petaluma.
Best exhibit of organs	Byron Mauzy	San Francisco.
Best exhibit of pianos	F. W. Spencer & Co.	San Francisco.
Best exhibit of shelf hardwood	Bauer & Co.	Petaluma.
Best exhibit of silverware	Bauer & Brown	Petaluma.

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS LXXXII—PAINTING, ORNAMENTAL WORK, ETC.			
Painting	Mrs. J. F. Fairbanks	Petaluma.	\$2 00
Painting	Mrs. J. L. Camm	Petaluma.	\$2 00
Painting	Mrs. T. A. Gilbert	Petaluma.	\$2 00
Painting	Mrs. B. M. Button	Petaluma.	\$2 00
Painting	Mrs. C. F. Northrup	Petaluma.	\$2 00
Painting	Mary King	Petaluma.	\$1 00
Painting	Mrs. H. L. Weston	Petaluma.	\$2 00
Painting	Mrs. J. L. Camm	Petaluma.	\$3 00
Painting	Mrs. P. B. Gilbert	Petaluma.	\$2 00
Painting	Mrs. E. L. Keller	Petaluma.	\$2 00
Painting	Mrs. F. B. Perry	Petaluma.	\$2 00
Painting	Mrs. F. B. Perry	Petaluma.	\$2 00
Painting	Mrs. S. L. Longee	Petaluma.	\$2 00
Painting	Miss M. Rodeck	Petaluma.	\$1 00
Painting	Mrs. S. L. Longee	Petaluma.	\$2 00
Painting	Mrs. A. H. Patty	Petaluma.	\$2 00
Painting	Mrs. L. C. Byce	Petaluma.	\$2 00
Painting	Mrs. B. N. Button	Petaluma.	\$2 00
Painting	Mrs. A. H. Patty	Petaluma.	\$1 00
Painting	Mrs. L. C. Byce	Petaluma.	\$2 00
Painting	Mrs. W. P. Bush	Santa Rosa.	\$2 00
Painting	Mrs. J. L. Camm	Petaluma.	\$2 00
Painting	Mrs. A. H. Patty	Petaluma.	\$1 00
Painting	Mrs. L. C. Byce	Petaluma.	\$2 00
Painting	Mrs. M. Miranda	Petaluma.	\$2 00
Painting	Mrs. A. H. Patty	Petaluma.	\$2 00
Painting	Mrs. H. L. Weston	Petaluma.	\$2 00
Painting	Mrs. W. P. Bush	Santa Rosa.	\$2 00
Painting	Mrs. W. H. Worth	Petaluma.	\$1 50
Painting	Mrs. T. A. Gilbert	Petaluma.	\$5 00
Painting	Mrs. J. L. Camm	Petaluma.	\$10 00
Painting	Mrs. W. P. Bush	Santa Rosa.	\$7 00
Painting	Mrs. A. J. Atchison	Petaluma.	\$1 00
Painting	Mrs. L. C. Byce	Petaluma.	\$2 00
Painting	Miss L. Kubie	Petaluma.	\$2 00
Painting	Miss D. Guillemetta	Petaluma.	\$2 00
Painting	Mrs. E. L. Keller	Petaluma.	\$2 00
Painting	Mrs. W. P. Bush	Santa Rosa.	\$2 00
Painting	Mrs. L. C. Byce	Petaluma.	\$2 00
Painting	Mrs. A. H. Patty	Petaluma.	\$2 00
Painting	Mrs. E. L. Keller	Petaluma.	\$2 00
Painting	Mrs. J. L. Camm	Petaluma.	\$2 00
Painting	Mrs. Wm. Miller	Petaluma.	\$1 00
Painting	Mrs. A. H. Patty	Petaluma.	\$1 50
Painting	Mrs. A. H. Patty	Petaluma.	\$2 50
Painting	Mrs. W. P. Bush	Santa Rosa.	\$2 00
Painting	Mrs. A. H. Patty	Petaluma.	\$2 00
Painting	Miss F. M. Ury	Petaluma.	\$2 00
Painting	Mrs. W. P. Bush	Santa Rosa.	\$5 00
CLASS LXXXIII—BREAD, CAKES, ETC.			
Bread	Miss A. Henderson	Petaluma.	\$3 00
Bread	Miss M. Cassidy	Petaluma.	\$3 00
Bread	Miss F. Henshaw	Petaluma.	\$3 00
Bread	Miss M. Cassidy	Petaluma.	\$3 00
Bread	Miss M. Cassidy	Petaluma.	\$3 00
Bread	Miss M. Cassidy	Petaluma.	\$3 00
Bread	Miss A. Waters	Petaluma.	\$3 00
Bread	Miss F. Henshaw	Petaluma.	\$3 00
Bread	Miss M. Cassidy	Petaluma.	\$3 00
General exhibit in this class by person. (Special premium by resident of the association)			
Star flour	Miss M. Cassidy	Petaluma.	\$20 00
Star flour	Mrs. Cordelia Gale	Petaluma.	\$10 00

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS LXXXIV—CHILDREN'S DEPARTMENT.		
Best white bread.....	Miss Lena Hall.....	Petaluma.....
Best fruit cake.....	Miss Lena Hall.....	Petaluma.....
Best pound cake.....	Miss Lena Hall.....	Petaluma.....
Best sponge cake.....	Miss E. Gilbert.....	Petaluma.....
Best calico dress.....	Miss M. E. Peck.....	Healdsburg.....
Best afghan.....	Miss I. Smith.....	Petaluma.....
Best crochet work.....	Miss N. Farrell.....	Petaluma.....
Best and most tastily dressed doll.....	Miss E. Bryant.....	Petaluma.....
Best crayon drawing.....	Miss M. Button.....	Petaluma.....
Best pencil drawing.....	Miss M. Button.....	Petaluma.....
Best eggs, largest variety.....	Levi Patty.....	Petaluma.....
Best etching.....	Miss E. Gilbert.....	Petaluma.....
Best mechanical skill for boys.....	Albert Powell.....	Petaluma.....
Best needlework.....	Miss R. Miranda.....	Petaluma.....
Best painting.....	Miss M. Button.....	Petaluma.....
Best penmanship.....	Levi Patty.....	Petaluma.....
Best plain sewing.....	Miss N. Farrell.....	Petaluma.....
CLASS LXXXV.		
Best collection of paintings exhibited by one person and obtained from any source.....	Mrs. L. C. Byce.....	Petaluma.....
CLASS LXXXVI—PAINTING, ORNAMENTAL WORK, ETC.		
Best exhibit of crayon drawings.....	Miss F. M. Ury.....	Petaluma.....
Best exhibit of minerals, petrifications, etc.....	Mrs. M. Trueholtz.....	Petaluma.....
Best collection of paintings.....	Mrs. L. C. Byce.....	Petaluma.....
Best painting in oil on canvas.....	Mrs. J. A. McNear.....	Petaluma.....
Best painting in oil on satin.....	Mrs. L. C. Byce.....	Petaluma.....
Best painting in water-colors.....	Miss F. M. Ury.....	Petaluma.....
Best painting in India ink.....	Miss F. M. Ury.....	Petaluma.....
Best animal painting.....	Mrs. L. C. Byce.....	Petaluma.....
Best flower painting.....	Mrs. J. A. McNear.....	Petaluma.....
Best kensington painting.....	Mrs. L. C. Byce.....	Petaluma.....
Best landscape painting.....	Miss F. M. Ury.....	Petaluma.....
Best porcelain painting.....	Mrs. J. A. McNear.....	Petaluma.....
Best repoussé work.....	Miss F. M. Ury.....	Petaluma.....
Best skeleton leaves.....	Mrs. S. L. Lougee.....	Petaluma.....
CLASS LXXXVII—PLANTS, BOUQUETS, ETC.		
Best exhibit of vase bouquets.....	Miss E. Mooney.....	Petaluma.....
Best exhibit of cut dahlias.....	Mrs. A. McPhail.....	Petaluma.....
Best exhibit of floral designs.....	Miss L. Whitney.....	Petaluma.....
Best exhibit of cut flowers.....	Miss L. Whitney.....	Petaluma.....
Best exhibit of paper flowers.....	Miss L. O'Neill.....	Petaluma.....

SPEED PROGRAMME.

TUESDAY, AUGUST 26, 1890.

RACE No. 1—TROTTING.

Two-year Old Stake. For foals of 1888. Fifty dollars entrance; of which ten must accompany the nomination, March first; twenty dollars to be paid on May and twenty dollars on July first; two hundred dollars added. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
ch. f., by Dawn; dam, Lena Bowles, by Ethan Allen.....	Ben E. Harris.....	San Francisco.
ch. s. f., by Dawn; dam, Pacheco, by.....	Arthur L. Whitney.....	Petaluma.
ch. m. f., by Anteeo; dam, Luella, by Nut.....	I. De Turk.....	Santa Rosa.

SUMMARY.

Annabelle.....	1	1
Myrie.....	2	2
Starlight.....		dis.

Time—2:40½; 2:39¼.

RACE No. 2—TROTTING.

Class. Purse, one thousand two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Temple, br. m., by Jackson Temple; by Emigrant.....	Harry J. Agnew.....	Hillsdale.
ch. b. m., by Nutwood; dam, by Geo. Wilkes, Jr.....	Emerson & Berry.....	Menlo Park.
Wilkes, ch. m., by Guy Wilkes; dam, by Arthurton.....	San Mateo Stock Farm.....	San Mateo.
ch. s. a., by Echo; dam, by Woodburn.....	Geo. A. Doherty.....	Crescent Mills.

SUMMARY.

Hand Wilkes.....	1	1	1
Victor.....	2	2	2
Anna Temple.....	4	3	3
Maggie E.....	3	4	4

Time—2:24; 2:21½; 2:22.

RACE No. 3—TROTTING.

2:27 Class. Purse, eight hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Flora G, br. m., by Altoona; dam, by Conway's Patchen.	B. C. Holly	San Mateo
Moses S, b. h., by Hawthorne; dam, by Whipple's Hambletonian.	L. U. Shippee	San Francisco
Prince B, b. g., by Brilliant; dam, Maud.	Phillips Bros.	San Francisco
Sister V, b. m., by Sidney; dam, Nettie Lambert.	San Mateo Stock Farm	San Mateo

SUMMARY.

Sister V	1 1
Moses S	2 2
Flora G	3 3
Prince B	4 4

Time—2:26½; 2:25½; 2:27½.

WEDNESDAY, AUGUST 27, 1890.

RACE No. 4—TROTTING.

District Yearling Stake. For foals of 1889. Thirty dollars entrance; of which ten dollars must accompany the nomination, March first; ten dollars to be paid on May first; ten dollars on July first; one hundred dollars added. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rustic King, b. c., by Rustic; dam, Gazelle.	P. J. Shafter	San Francisco
Nonpareil, br. c., by Dawn; dam, Jennie Offet.	Arthur L. Whitney	San Francisco
Columbus, br. c., by McDonald Chief; dam, Fannie Rose.	Thomas Smith	San Francisco
Sidena, b. f., by Sidney; dam, Lena Bowles.	Ben E. Harris	San Francisco

SUMMARY.

Nonpareil	1 1
Rustic King	2 2
Columbus	3 3
Sidena	4 4

Time—3:05.

RACE No. 5—SPECIAL TROTTING.

Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Pink, ch. m., by Inca; dam, by Echo.	B. C. Holly	San Mateo
Maggie E, br. m., by Nutwood; dam, by Geo. M. Patchen, Jr.	F. H. Burke	San Francisco
Redwood, b. h., by Anteeo; dam, Lou Milton.	McFadyen & Murphy	San Francisco
Oaknut, ch. s., by Dawn; dam, Miss Brown.	Lee Shaner	San Francisco

SUMMARY.

Redwood	3 2 1 1 1
Maggie E	1 1 2 2 3
Oaknut	2 3 3 3 2
Pink	dis.

Time—2:24½; 2:23½; 2:26½; 2:27½; 2:26½.

RACE No. 6—SPECIAL TROTTING.

Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Redwood, b. g., by Weatherhead's Woodnut; dam, by Washingtonian.	C. H. Corey	San José.
Sister V, b. m., by Meredith; dam, Black Bess.	P. Brandow	San Francisco.
Flora G, Jr., br. h., by Alcona; dam, Madonna.	Lee Shaner	Petaluma.
Mambrino Chief, Jr., by McDonald Chief.	Thos. Smith	Vallejo.
Sister V, b. g., by George Wilkes.	T. H. Griffin	San Francisco.
Flora G, b. m., by Jackson Temple.	D. Mizner	Petaluma.

SUMMARY.

Mattie P	4 2 1 1 1
Alcona, Jr.	1 1 5 5 3
Redwood	5 3 2 2 2
Mambrino Chief, Jr.	2 4 4 4 4
Fury V	3 5 3 3 5
Walby	6 dis.

Time—2:30½; 2:31½; 2:33½; 2:33½; 2:34½.

THURSDAY, AUGUST 28, 1890.

RACE No. 7—TROTTING.

2:20 Class. Purse, eight hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wilkes, b. m., by Guy Wilkes; dam, Echo.	San Mateo Stock Farm	San Mateo.
Fury, b. g., by Christian's Patchen.	J. C. Moran	San Francisco.
Flora G, b. h., by Hawthorne.	L. U. Shippee	Stockton.
Free Coinage, b. g., by Abbotsford; dam, Agnes.	Peter Brandow	San Francisco.
Mason, b. s., by Echo; dam, Belle Mason.	E. B. Gifford	San Diego.
Derby, br. s., by Steinway; dam, Katy G.	B. C. Holly	Vallejo.

SUMMARY.

Chas. Derby	1 1 1
Una Wilkes	2 2 2
Free Coinage	3 3 4
Bob Mason	5 5 3
Ed Fay	4 4 5
Kilrain	dis.

Time—2:24½; 2:25½; 2:24½.

RACE No. 8—TROTTING.

Free for all three-year olds (foals of 1887). Purse, five hundred dollars; entrance fee, one per cent of the purse; of which two and one half per cent must accompany the nomination, to be made on March first; two and one half per cent to be paid on May first and five per cent on August first. Four colts to make the last payment, and three mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Regal Wilkes, b. c., by Guy Wilkes; dam, Margaret, by Sultan	San Mateo Stock Farm	San Mateo

SUMMARY.

Regal Wilkes	W. A.
Time—3:14.	

RACE No. 9—TROTTING.

District Three-year Old Purse. Purse, three hundred dollars. Entrance fee, one per cent of the purse; of which five per cent must accompany the nomination March first and five per cent paid on August first. Four colts to make the last payment, and three mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Maud Dee, b. f., by Anteo; dam, Maud	Rufus Murphy	San Mateo
Leoline, b. f., by Clovis; dam, Leah	Wilfred Page	Penn
Kaffir, b. c., by Alcazar; dam, Flower Girl	B. C. Holly	
Anterenio, b. c., by Antevolo; dam, Pastime	P. J. Shafter	

SUMMARY.

Maud Dee	2 2 1 1 1
Anterenio	1 1 2 2 2
Kaffir	4 4 3 3 3
Leoline	3 3 dis

Time—2:34; 2:33; 2:37; 2:39½; 2:35½.

RACE No. 10—PACING.

2:30 Class. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Princess Alice, blk. m., by Dexter Prince	John Patterson	San Mateo
Sunrise, ch. m., by Regent	John McConnell	San Mateo
Hummer, ch. g., by Sidney; dam, Humming Bird	John Garrity	San Mateo
Rupee, br. h., by Guy Wilkes	San Mateo Stock Farm	San Mateo

SUMMARY.

Rupee	2 1 1 1 1
Hummer	1 2 2 2 2
Sunrise	3 3 2 2 2
Princess Alice	4 4 4 4 4

Time—2:21½; 2:20; 2:23½; 2:26.

FRIDAY, AUGUST 29, 1890.

RACE No. 11—RUNNING.

Free for all ages. Purse, five hundred dollars. One and one half miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wild Oats, b. s., by Joe Daniels	Dennison Bros.	Sacramento.
Captain Al, b. g., by Wildidle	O. Appleby	San José.
Captain Al, br. s., by Kingston	Owens Bros.	Fresno.

SUMMARY.

Wild Oats	1
Captain Al	2
Hotspur	3

Time—2:39½.

RACE No. 12—RUNNING.

Free for all ages. Purse, three hundred dollars. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Alhambra, b. f., by Wildidle	O. Appleby	San José.
Alhambra, br. m., by Wildidle	W. L. Appleby	San José.
Alhambra, ch. f., by Prince of Norfolk	Dennison Bros.	Sacramento.

SUMMARY.

Alhambra	1
Junata	2
Minnie B.	3

Time—1:17½.

RACE No. 13—RUNNING.

Free for two-year olds. Purse, four hundred dollars. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wm. Boots, b. c., by Duke of Norfolk	Wm. Boots	Milpitas.
Wm. Boots, h. f., by Three Cheers	G. H. Kennedy	Santa Rosa.
Wm. Boots, a. by Wildidle	Owens Bros.	Fresno.

SUMMARY.

Wm. Boots	1
Wm. Boots	2
Wm. Boots	3

Time—1:17½.

RACE No. 14—SPECIAL TROTTING.

Purse, one hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Poco Tiempo, b. s., by Anteeo.....	W. P. Fine.....	San Francisco
Moss Rose, b. m., by Anteeo; dam, by Nutwood.....	Lot D. Slocum.....	San Francisco
Whalebone, b. s., by Inca; dam, by Nelson.....	J. B. Hinkle.....	San Francisco
Kaffir, b. s., by Alcazar; dam, Flower Girl.....	B. C. Holly.....	San Francisco
May Day, b. m., by Anteeo.....	Gus. Carey.....	San Francisco

SUMMARY.

Whalebone.....	1 1 1
Kaffir.....	4 3 2
Moss Rose.....	3 2 4
Poco Tiempo.....	2 4 4
May Day.....	5 3 3

Time—2:40; 2:37½; 2:34½.

SATURDAY, AUGUST 30, 1890.

RACE No. 15—TROTTING.

For two-year olds (foals of 1888). Purse, four hundred dollars. Entrance, ten per cent of the purse; of which two and one half per cent must accompany the nomination made on March first; two and one half per cent to be paid on May first, and five per cent August first; four colts to make the last payment, and three to start. Mile and a half.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Vida Wilkes, ch. f., by Guy Wilkes; dam, Vixen.....	San Mateo Stock Farm.....	San Francisco
Starlight, ch. f., by Dawn; dam, Lena Bowles.....	Ben E. Harris.....	San Francisco

SUMMARY.

Vida Wilkes.....	1 1 1
Starlight.....	2 1 1

Time—2:43½; 2:28½.

RACE No. 16—TROTTING.

2:24 Class. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Redwood, b. s., by Anteeo; dam, Lou Milton.....	McFadyen & Murphy.....	San Francisco
Wanda, b. m., by Eros; dam, Accident.....	La Siesta Ranch.....	Menlo Park
Mary Lou, ch. m., by Tom Benton; dam, Brown Jennie.....	J. L. McCord.....	San Francisco
Pink, ch. m., by Inca; dam, by Echo.....	B. C. Holly.....	San Francisco
Flora Belle, blk. m., by Alcona; dam, Fontana.....	San Mateo Stock Farm.....	San Francisco

SUMMARY.

Mary Lou.....	2 4 1
Wanda.....	1 1 4
Pink.....	3 5 2
Flora Belle.....	4 2 3
Redwood.....	5 3 6

Time—2:22½; 2:27; 2:22½; 2:25; 2:24.

RACE No. 17—SPECIAL TROTTING.

Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Geo. C. m., by Whippleton; dam, by Nan- king.....	H. Starr.....	Napa.
Washington, b. s., by Mambrino Chief, Jr.....	Thos. Smith.....	Vallejo.
Lock, ch. s., by Antelope; dam, Dolly.....	W. B. Sanborn.....	Santa Rosa.
Geo. C. m., by Altoona; dam, by Nanbuck.....	B. C. Holly.....	Vallejo.

SUMMARY.

Geo. Washington.....	1 1 1
Red Lock.....	3 2 3
Flora G.....	4 3 2
Geo. C.....	2 4 4

Time—2:27½; 2:28½; 2:28.

TRANSACTIONS

OF THE

FIFTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of San Mateo and Santa Clara.

REPORT.

SAN JOSÉ, January 2, 1891.

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Fifth District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

GEORGE H. BRAGG,
Secretary.

OFFICERS OF THE ASSOCIATION.

WILLIAM BUCKLEY

GEORGE H. BRAGG

T. ELLARD BEAN

DIRECTORS.

GEORGE B. POLHEMUS

ALEX. GORDON

D. J. MURPHY

J. W. REA

J. P. SARGENT

WM. BOOTS

E. TOPHAM

WILLIAM BUCKLEY

RECEIPTS AND EXPENDITURES.

Receipts.

from club house	\$360 00
and other privileges, fair week	2,500 00
privilege, blood horse meeting	50 00
old	4 75
privilege, fair week	1,663 95
borrowed from Treasurer	2,000 00
money, in stakes and purses	3,891 89
receipts, fair week—Monday	507 00
Tuesday	800 50
Wednesday	458 50
Thursday	685 00
Friday	1,285 00
Saturday	719 25
Sunday	50 00
of grounds for buffalo show	3,000 00
appropriation	208 16
paid to J. Hobson	250 00
membership to J. H. Henry	1,075 55
advanced by President and Directors	1,500 00
as per last statement	262 64
	<u>\$21,252 19</u>

Expenditures.

membership to National Trotting Association	\$75 00
and stacking hay	135 00
ascensions, fair week	700 00
	1,541 00
graphs, McNeil Bros.	150 00
graphs, Strobridge Lithograph Company	129 35
	14 00
	145 00
	18 00
	39 00
and stakes	7,841 00
my's services	600 00
	208 00
	270 00
	91 65
ing tools and shoeing horses	124 20
	174 65
ragon	288 30
ing fair week	664 30
	15 00
	100 00
	115 00
turned to Treasurer	2,000 00
ing and advertising	814 90
	278 74
ing track	2,082 60
ing track	25 00
	570 70
and repairs on grounds	1,254 45
hay, and straw	594 64
in hands of Treasurer	242 71
	<u>\$21,252 19</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
THOROUGHBREDS—STALLIONS.		
Imp. Brutus, four years old and over.	Wm. Boots	Milpitas
Bob Wooding, four years old and over.	Wm. Boots	Milpitas
—, two years old	J. Reavy	Milpitas
Sir Walter, two years old	Wm. Boots	Milpitas
Elmwood, one year old	Wm. Boots	Milpitas
—, under one year	J. Reavy	Milpitas
—, under one year	Wm. Boots	Milpitas
MARES.		
Mollie H and colt	Wm. Boots	Milpitas
The Cripple and colt	Wm. Boots	Milpitas
Ariola, four years old and over	Wm. Boots	Milpitas
Beauty, four years old and over	Wm. Boots	Milpitas
—, three years old	Wm. Boots	Milpitas
Initiation, three years old	Wm. Boots	Milpitas
—, two years old	Wm. Boots	Milpitas
Clauda, one year old	Wm. Boots	Milpitas
—, under one year	Wm. Boots	Milpitas
STANDARD TROTTERS—STALLIONS.		
Billy Thornhill, four years old and over	James Boyd	San José
Nulgrove, four years old and over	E. Topham	Milpitas
Kaffir, three years old	B. C. Holly	Vallejo
Mystic, three years old	Jas. Maddock	Sonoma
STANDARD SUCKLING COLT.		
Frank T	E. Topham	Milpitas
MARES.		
Lady Nutwood, four years old and over	E. Topham	Milpitas
Duchess, four years old and over	F. H. Burke	Menlo Park
Sylvia, three years old	E. Topham	Milpitas
Neva, two years old	B. C. Holly	Vallejo
Lady Thorn, one year old	E. McLees	Vallejo
ROADSTERS—STALLIONS.		
Electric Light, four years old and over	C. Younger & Son	San José
Almoone, Jr., four years old and over	J. Savidan	San José
Mambrino, three years old	Peter Einsfeld	San José
Xanthus, three years old	J. R. Weller	San José
Walnut, two years old	E. McLees	Vallejo
Almont, Jr., two years old	Morgan Hill	San José
Captain B, one year old	F. Boyd	San José
Woodstock, one year old	F. H. Burke	Menlo Park
Ned (gelding), four years old and over	H. G. Cox	San José
Hubbard (gelding), four years old and over	C. Younger & Son	San José
MARES.		
Lady Grosvenor, four years old and over	E. Topham	Milpitas
Sweet Secret, four years old and over	C. Younger & Son	San José
Jessie, three years old	L. M. Morse	Lodi
Doreatch, three years old	E. S. Smith	San José
Lady Dashwood, one year old	J. Weatherhead	San José
Belle Mahone, suckling colt	F. H. Burke	Menlo Park

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
COACH HORSES—MATCHED SPAN.			
and Dan	Morgan Hill	San José	\$20 00
COACH HORSES—MARE OR GELDING.			
	F. H. Burke	Menlo Park	
STANDARD STALLIONS.			
and, two years old	Morgan Hill	San José	\$10 00
MARES.			
and colt	Morgan Hill	San José	\$20 00
three years old	Morgan Hill	San José	\$10 00
ENGLISH COACH—STALLIONS.			
and, four years old and over	Cook Stock Farm	Danville	\$20 00
GRADED DRAFT—MARES.			
four years old and over	A. Smith	Redwood	\$12 00
four years old and over	A. Smith	Redwood	\$8 00
OF ALL WORK—STALLIONS.			
four years old and over	T. W. Barstow	San José	\$15 00
four years old and over	Cook Stock Farm	Danville	\$10 00
one year old	Est. of John Trimble	San José	\$6 00
MARES.			
and colt	Est. of John Trimble	San José	\$15 00
two years old	Est. of John Trimble	San José	\$8 00
suckling colt	Est. of John Trimble	San José	\$4 00
FAMILIES.			
Wooding (sire) and five colts	Wm. Boots	Milpitas	\$25 00
H (dam) and three colts	Wm. Boots	Milpitas	\$20 00
(dam) and three colts	Wm. Boots	Milpitas	\$10 00
PREMIUMS OFFERED BY D. J. MURPHY ON SUCKLING COLTS BY SOUDAN.			
	A. P. Roza	Milpitas	1st prem.
	J. A. Clayton	San José	2d prem.
	Martin Kell	San José	3d prem.
OTHER THAN THOROUGHBRED, WITH COLTS.			
Thornhill and five colts	James Boyd	San José	\$25 00
and five colts	J. Weatherhead	San José	\$15 00
OTHER THAN THOROUGHBRED, WITH COLTS.			
and three colts	E. Topham	Milpitas	\$20 00
and three colts	Martin Kell	San José	\$10 00
CATTLE—DURHAMS—BULLS.			
blevington of Forest Home, years old and over	C. Younger & Son	San José	\$17 50
blevington of Forest Home, years old and over	C. Younger & Son	San José	\$10 00
blevington of Forest Home, years old and over	C. Younger & Son	San José	\$12 50
blevington of Forest Home, years old and over	C. Younger & Son	San José	\$8 00
blevington of Forest Home, years old and over	C. Younger & Son	San José	\$5 00
blevington of Forest Home, years old and over	C. Younger & Son	San José	\$3 00
blevington of Forest Home, years old and over	C. Younger & Son	San José	\$6 00
COWS.			
ward 3d and calf	C. Younger & Son	San José	\$12 50
blevington of Forest Home and calf	C. Younger & Son	San José	\$7 00
blevington of Forest Home, three years old and over	C. Younger & Son	San José	\$12 50

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Jessie Maynard 4th, three years old and over	C. Younger & Son	San José
Oxford Rose 12th, two years old	C. Younger & Son	San José
Bonnie Belle 6th, two years old	C. Younger & Son	San José
Jessie Maynard 5th, one year old	C. Younger & Son	San José
Jessie Maynard 6th, one year old	C. Younger & Son	San José
Jessie Maynard 7th, calf	C. Younger & Son	San José
Oxford Rose 6th, calf	C. Younger & Son	San José
JERSEYS—BULLS.		
Rajah, three years old and over	G. B. Polhemus	Coyote
Catalpa's Victor, two years old	J. S. Connor	Santa Clara
Billy R, one year old	J. S. Connor	Santa Clara
King Lear, calf	J. S. Connor	Santa Clara
COWS.		
Tama's Daughter and calf	J. S. Connor	Santa Clara
Mayflower, three years old and over	G. B. Polhemus	Coyote
Edith, three years old and over	G. B. Polhemus	Coyote
Katie Felton 2d, two years old	G. B. Polhemus	Coyote
Daisy F 3d, two years old	J. S. Connor	Santa Clara
Reagon Leon, one year old	J. S. Connor	Santa Clara
Lehana 2d, calf	J. S. Connor	Santa Clara
Rose, calf	G. B. Polhemus	Coyote
HOLSTEINS—BULLS.		
King of Menlo, three years old and over	F. H. Burke	Menlo Park
Egmond Pride, three years old and over	G. B. Polhemus	Coyote
King Aaggie Clothilde, two years old	G. B. Polhemus	Coyote
Aaggie Kathleen's Pride, two years old	F. H. Burke	Menlo Park
Troy Sedro, one year old	F. H. Burke	Menlo Park
Secretary Bragg, one year old	G. B. Polhemus	Coyote
Thissa Lad, calf	F. H. Burke	Menlo Park
Sam Rucker, calf	G. B. Polhemus	Coyote
COWS.		
Anna Egmond and calf	G. B. Polhemus	Coyote
Thissa and calf	F. H. Burke	Menlo Park
Geert Van Diepen, three years old and over	G. B. Polhemus	Coyote
Ontaretta, three years old and over	F. H. Burke	Menlo Park
Aaggie Lelia's Precious, two years old	F. H. Burke	Menlo Park
Josephine Lincoln, two years old	G. B. Polhemus	Coyote
Anna Egmond 3d, one year old	G. B. Polhemus	Coyote
Rose of the Rockies, one year old	W. T. Eddy	San José
Cortez Dene Koopman, calf	F. H. Burke	Menlo Park
Tryntje Lincoln 4th, calf	G. B. Polhemus	Coyote
MILK CONTEST.		
Brackenhaf (59 pounds 9 ounces)	G. B. Polhemus	Coyote
ANGUS AND GALLOWAYS—COWS.		
Kittie B, two years old	F. H. Burke	Menlo Park
GRADED COWS.		
Peach Blossom, three years old	C. Younger & Son	San José
Riverdale, three years old	W. T. Eddy	San José
Pauline, two years old	C. Younger & Son	San José
FAT STEER OR COW, ANY AGE OR BREED.		
Nevada Belle 8th	C. Younger & Son	San José
White Face	F. H. Burke	Menlo Park
HERDS—BEEF PURPOSES.		
26th Kirklevington of Forest Home and five cows	C. Younger & Son	San José
5th Kirklevington of Forest Home and four cows	C. Younger & Son	San José

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
KIDS—DAIRY PURPOSES.			
Aggie Clothilde and four cows...	G. B. Polhemus...	Coyote...	\$20 00
Menlo and four cows	F. H. Burke	Menlo Park	\$10 00
—UNDER TWO YEARS OLD.			
Kirklevington and four cows	C. Younger & Son	San José	\$20 00
Aggie Clothilde and four cows	G. B. Polhemus	Coyote	\$5 00
Kirklevington and four cows	C. Younger & Son	San José	\$5 00
SWEEPSTAKES.			
Kirklevington of F. H.	C. Younger & Son	San José	\$20 00
Rose of Forest Home.	C. Younger & Son	San José	\$20 00
SHEEP.			
Smikins (Southdown ram)	D. O. Quinn	San José	\$6 00
Clara (Southdown ewe)	D. O. Quinn	San José	\$6 00
... (Southdown ewe)	D. O. Quinn	San José	\$3 00
... ram	A. Smith	Redwood	\$6 00
... ewes	A. Smith	Redwood	\$3 00
... of three lambs	A. Smith	Redwood	\$5 00
... of five lambs	A. Smith	Redwood	\$5 00
GOATS—ANGORA.			
...	C. P. Bailey	San José	\$6 00
...	C. P. Bailey	San José	\$3 00
... of five goats	C. P. Bailey	San José	\$5 00
WINE—BERKSHIRE—BOARS.			
... the Ripper, one year old and over.	J. S. Connor	Santa Clara	\$7 50
... Duke, one year old and over.	A. Smith	Redwood	\$5 00
... the Ripper 2d, under one year	J. S. Connor	Santa Clara	\$6 00
... the Ripper 3d, under one year	J. S. Connor	Santa Clara	\$3 00
SOWS.			
... 1st, one year old and over.	J. S. Connor	Santa Clara	\$7 00
... wood Lass, one year old and over.	A. Smith	Redwood	\$4 00
... wood Beauty, under one year	A. Smith	Redwood	\$6 00
... under one year	J. S. Connor	Santa Clara	\$3 00
ESSEX—SOWS.			
... under one year	W. T. Eddy	San José	\$6 00
... under one year	James Eddy	San José	\$5 00
POLAND-CHINA—BOARS.			
... Duke, one year old and over	A. Smith	Redwood	\$7 50
... Duke, under one year	A. Smith	Redwood	\$6 00
SOWS.			
... Princess, one year old and	A. Smith	Redwood	\$7 00
... Duke, under one year	A. Smith	Redwood	\$6 00
PEN OF ANY BREED.			
... of eight	J. S. Connor	Santa Clara	\$10 00
... of five	F. H. Burke	Menlo Park	\$5 00
FINEST AND FATTEST HOG.			
... of Thule	F. H. Burke	Menlo Park	\$6 00
POULTRY—PLYMOUTH ROCKS.			
... pair	E. H. Freeman	Santa Clara	\$3 00
... pair (white)	E. H. Freeman	Santa Clara	\$3 00
... brooding pen	E. H. Freeman	Santa Clara	\$5 00
... brooding pen (white)	E. H. Freeman	Santa Clara	\$5 00
... pair chicks	E. H. Freeman	Santa Clara	\$2 00
... pair chicks	O. J. Albee	Santa Clara	\$2 00

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
DARK BRAHMAS.		
One pair	O. J. Albee	Santa Clara
One breeding pen	E. H. Freeman	Santa Clara
One pair chicks	E. H. Freeman	Santa Clara
PARTRIDGE-COCHINS.		
One pair	E. H. Freeman	Santa Clara
One breeding pen	E. H. Freeman	Santa Clara
One pair chicks	E. H. Freeman	Santa Clara
WHITE LEGHORNS.		
One pair	E. H. Freeman	Santa Clara
One pair (rose comb)	E. H. Freeman	Santa Clara
One pair (black)	E. H. Freeman	Santa Clara
One pair chicks (brown)	O. J. Albee	Santa Clara
One pair chicks (white)	O. J. Albee	Santa Clara
One breeding pen (white)	O. J. Albee	Santa Clara
One breeding pen (brown)	E. H. Freeman	Santa Clara
LANGSHANS.		
One pair (black)	O. J. Albee	Santa Clara
One pair (white)	O. J. Albee	Santa Clara
One breeding pen (black)	O. J. Albee	Santa Clara
One breeding pen (white)	O. J. Albee	Santa Clara
One pair chicks (black)	O. J. Albee	Santa Clara
One pair chicks (white)	O. J. Albee	Santa Clara
HOUDANS.		
One pair	E. H. Freeman	Santa Clara
One pair chicks	E. H. Freeman	Santa Clara
BLACK-BREASTED RED GAME BANTAMS.		
One pair	E. H. Freeman	Santa Clara
One pair	Mrs. Jas. Snow	San José
JAPAN BANTAMS.		
One pair	Mrs. Jas. Snow	San José
SEABRIGHT BANTAMS.		
One pair	E. H. Freeman	Santa Clara
BRONZE TURKEYS.		
One pair	W. T. Eddy	San José
PEKIN DUCKS.		
One pair	E. H. Freeman	Santa Clara
WYANDOTTES.		
One pair (golden)	O. J. Albee	Santa Clara
One pair chicks (golden)	O. J. Albee	Santa Clara
One pair chicks (white)	O. J. Albee	Santa Clara
One pair chicks (laced)	E. H. Freeman	Santa Clara
One breeding pen (laced)	E. H. Freeman	Santa Clara
One breeding pen (white)	E. H. Freeman	Santa Clara
One breeding pen (white)	E. H. Freeman	Santa Clara
One breeding pen (silver)	O. J. Albee	Santa Clara

SPEED PROGRAMME.

MONDAY AUGUST 11, 1890.

SPECIAL TROTTING.

named horses. Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Cal. Nutwood; dam, by Echo	Chas. T. Foster	San José.
by Santa Claus	N. L. Stockton	San José.
by Baywood; dam, by John Nelson	T. H. Griffin	San José.
by Speculation; dam, unknown	H. C. Ahlers	San José.

SUMMARY.

Dr. Swift	1
Annie C	2
San José	3
Billy C	4

Time—2:28; 2:29; 2:26.

SPECIAL TROTTING.

named horses. Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Cal. Nutwood; dam, by Steinway	Chas. T. Foster	San José.
by Chrisman's Hambletonian	Fred. Stockton	San José.
by Woodnut; dam, by Patchen	W. T. Domesky	San José.
by Grosvenor; dam, Lady Nutwood	E. Topham	Milpitas.
by Cal. Nutwood; dam, by Hercules	T. W. Barstow	San José.

SUMMARY.

Wood C	1
Wulgrove	2
Wara	3
Wron	dis.
Wente	dis.

Time—2:41; 2:40½; 2:42.

TUESDAY, AUGUST 12, 1890.

RACE No. 1—TROTTING.

2:20 Class. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Express, by Electioneer; dam, Esther	Palo Alto Stock Farm	Palo Alto
Emma Temple, by Jackson Temple; dam, by Emigrant	Agnew Stock Farm	Agnew
Hazel Wilkes, by Guy Wilkes; dam, Blanche	San Mateo Stock Farm	San Mateo
Jim L, by Dan Voorhies; dam, Gracie	J. A. Linscott	San Jose

SUMMARY.

Hazel Wilkes	.....
Emma Temple	.....
Express	.....
John L	.....

Time—2:24½; 2:23; 2:23.

RACE No. 2—TROTTING.

2:27 Class. Purse, one thousand dollars. Closed with thirteen entries. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Guide, by Director; dam, Imogene	A. T. Hatch	San Jose
Flora G, by Altoona; dam, by Conway's Patchen	B. C. Holly	San Jose
Sister V, by Sidney; dam, Nettie Lambert	San Mateo Stock Farm	San Mateo
Moses S, by Hawthorne; dam, by McCracken's		
Black Hawk	L. U. Shippee	San Jose

SUMMARY.

Sister V	.....
Moses S	.....
Guide	.....
Flora G	.....

Time—2:22½; 2:23; 2:25½.

RACE No. 3—TROTTING.

Infant Trotting Stake. Foals of 1889. One hundred dollars added. Mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Acorn, by Sevenoaks; dam, Elmorene	Ben E. Harris	San Jose
Young Herold, by Royal George; dam, by John Nelson	James Weatherhead	San Jose
Lady Thorn, by Billy Thornhill; dam, Lady Nutwood	Ed. McLees	San Jose
Detector, by Designer; dam, Winnie	H. Scott	San Jose
Luck, by Eros; dam, by Nutwood	La Siesta Ranch	San Jose

SUMMARY.

Acorn	.....	1
Luck	.....	2
Young Herold	.....	3
Lady Thorn	.....	4
Detector	.....	5

Time—3:16.

WEDNESDAY, AUGUST 13, 1890.

RACE No. 4—RUNNING.

Handicap Sweepstake. For all ages. Fifty dollars entrance; twenty-five dollars forfeit; two hundred dollars added; seventy-five dollars to second horse; fifty dollars to third. Closed with ten entries. Three fourths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
B, by Joe Hooker; dam, Kate Carson	Undine Stable	Stockton.
Revolver, by Joe Daniels; dam, Partisan	J. J. Dolan	Modesto.
Wildidie, by Wildidie; dam, by Monday	O. Appleby	San Jose.
D, by Wheatly; dam, Black Maria	Owens Bros.	Fresno.

SUMMARY.

Daisy D.	.....	1
Alarata	.....	d. h.
Revolver	.....	d. h.
Betta B.	.....	0

Time—1:15.

RACE No. 5—RUNNING.

Two-year olds. Fifty dollars entrance; twenty-five dollars forfeit; two hundred dollars added; seventy-five dollars to second horse; fifty dollars to third. Seven eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Kylie Daly; dam, Rachel	Undine Stable	Stockton.
by Cyrus; dam, Katherine	G. Harrison	Stockton.
of Milpitas, by Duke of Norfolk; dam, by Wildidie; dam, Precious	Elmwood Stable	Milpitas.
	Owens Bros.	Fresno.

SUMMARY.

Kyle	.....	1
Duke of Milpitas	.....	2
Macro	.....	3

Time—1:30½.

RACE No. 6—RUNNING.

For three-year olds. Fifty dollars entrance; twenty-five dollars forfeit; dollars added; seventy-five dollars to second horse; fifty dollars to third. One eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sheridan, by Young Bazaar; dam, Lost Girl	P. Siebenthaler	
Raindrop, by Wildidle; dam, imp. Teardrop	W. L. Appleby	
Captain Al, by Kingston; dam, Black Maria	Owens Bros.	

SUMMARY.

Raindrop
Captain Al

Time—1:57.

RACE No. 7—RUNNING.

Selling purse, three hundred dollars; fifty dollars to second horse. For all ages entered to be sold for one thousand five hundred dollars to carry rule weight; two off for each one hundred dollars less down to one thousand dollars; then one off for each one hundred dollars less down to five hundred dollars. Horses entered to be sold to carry five pounds above the scale. Mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Tycoon, by Shiloh; dam, Margery	Undine Stable	
Nabeau, by Nathan Coombs; dam, Beauty	Elmwood Stable	
Wild Oats, by Wildidle; dam, Mary Givens	W. L. Appleby	

SUMMARY.

Tycoon
Nabeau
Wild Oats

Time—1:42½; 1:42½.

THURSDAY, AUGUST 14, 1890.

RACE No. 8—TROTTING.

3:00 Class. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Ariana, by Ansel; dam, Rebecca	Palo Alto Stock Farm	
Una Wilkes, by Guy Wilkes; dam, Blanche	San Mateo Stock Farm	
Beaury Mc, by Nephew; dam, by Alexander	Undine Stable	
Kilfrain, by Hawthorne; dam, by Whipple's		
Hambletonian	L. U. Shippee	
Ed Fay, by Christian Patchen; dam, by Whipple's Hambletonian	J. C. Moran	

SUMMARY.

Beaury Mc
Ed Fay
Una Wilkes

Time—2:28; 2:27½; 2:27½.

SPECIAL TROTTING.

For a record.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Chrisman's Hambletonian	Fred. Stockton	San José.
by Piedmont	E. C. Gould	San José.
by Nutwood; dam, by Geo. M.	E. S. Smith	San José.

SUMMARY.

Vimington 1
bywood 2
byron dis.

Time—2:33; 2:33; 2:33½.

SPECIAL TROTTING.

For one hundred dollars a side.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Speculation	H. Cahlers	San José.
by Santa Claus	Fred. Stockton	San José.

SUMMARY.

San José 1
by C dr.

Time—2:36.

RACE No. 9—PACING.

Class. Purse, six hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Alice, by Dexter Prince; dam, by Gen.	John Patterson	Linden.
by Sidney; dam Humming Bird	John Garrity	San Francisco.
by Guy Wilkes; dam, Sable Hayward	San Mateo Stock Farm	San Mateo.
Junista	Owens Bros.	Fresno.

SUMMARY.

Summer 1
Access Alice 2
by 3
by dr.

Time—2:23½; 2:20½; 2:25½.

RACE No. 10—TROTTING.

Santa Clara Trotting Stake. For two-year olds. One hundred and fifty dollars purse with ten entries. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Johnnie D, by Abbotsford; dam, Baby Mine	J. W. Rea	San José.
Riley, by Sultan, Jr.; dam, by Hercules	John Charleston	Milpitas.
Queen Anne, by King William; dam, by Chrisman's Hambletonian	N. W. Stockton	

SUMMARY.

Johnnie D	1
Queen Anne	2
Riley	3
Time—3:11½; 3:08½.	

FRIDAY, AUGUST 15, 1890.

RACE No. 11—RUNNING.

Handicap sweepstake for all ages. Fifty dollars entrance, twenty-five dollars forfeit; two hundred and fifty dollars added; seventy-five dollars to second horse; fifty dollars to third. Two and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Tycoon, by Shiloh; dam, Margery	Undine Stable	
Index, by Thad Stevens; dam, Gypsy	Elmwood Stable	
Nabeau, by Nathan Coombs; dam, Beauty	Elmwood Stable	
Wild Oats, by Wildidle; dam, Mary Givens	W. L. Appleby	

SUMMARY.

Index	1
Wild Oats	2
Nabeau	3
Time—4:02½.	

RACE No. 12—RUNNING.

For all ages. Fifty dollars entrance, twenty-five dollars forfeit; two hundred and fifty dollars added; seventy-five dollars to second horse; fifty dollars to third. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Tycoon, by Shiloh; dam, Margery	Undine Stable	
Silverbow, by J. M. Fector; dam, Belle of the Mead	J. M. Van Winkle	
Nerva, by Bob Wooding; dam, Lizzie Marshall	Elmwood Stable	
Carmen, by Wildidle; dam, Nettie Brown	W. L. Appleby	
Alfarata, by Wildidle; dam, Monday filly	O. Appleby	
Daisy D, by Wheatly; dam, Black Maria	Owens Bros.	

SUMMARY.

Daisy D	1
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SPECIAL RUNNING.

For three-year olds. Fifty dollars entrance, twenty-five dollars forfeit; two hundred and fifty dollars added; seventy-five dollars to second horse; fifty dollars to third. Winner of five pounds extra. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Wildidle; dam, Monday filly	O. Appleby	San José.
by Bob Wooding; dam, Mollie	Elmwood Stable	Milpitas.
	Wm. Masten	

SUMMARY.

Finco	1
Amista	2
Regonald	3
Time—1:04.	

RACE No. 13—RUNNING.

For three-year olds. Fifty dollars entrance, twenty-five dollars forfeit; two hundred and fifty dollars added; seventy-five dollars to second horse; fifty dollars to third. Winner of five pounds extra. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Young Baazar; dam, Lost Girl	P. Siebenthaler	Sacramento.
by Wildidle; dam, imp. Teardrop	W. L. Appleby	Santa Clara.
by Al, by Kingston; dam, Black Maria	Owens Bros.	Fresno.

SUMMARY.

Captain Al	1
Teardrop	2
Time—2:12½.	

RACE No. 14—RUNNING.

For three-year olds. Fifty dollars entrance, twenty-five dollars forfeit; two hundred and fifty dollars added; seventy-five dollars to second horse; fifty dollars to third. Winner of five pounds extra. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Glen Ellen; dam, Queen	H. D. Miller	San Francisco.
by Pill Box; dam, Della Walker	M. T. Walters	Sacramento.
by Inauguration; dam, Brown	Elmwood Stable	Milpitas.
by Norfolk; dam, Mattie Glenn	Owens Bros.	Fresno.

SUMMARY.

Glenn	1
Callation	2
Stross	3
Colette	dis.
Time—1:15; 1:16½; 1:16½.	

SATURDAY, AUGUST 16, 1890.

RACE No. 15—TROTTING.

2:24 Class. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Argent, by Sterling; dam, Madam Buckner.	R. H. Walton.	
Pink, by Inca; dam, by Echo.	B. C. Holly.	
Mary Lou, by Tom Benton; dam, Brown Jennie.	J. L. McCord.	
Sister V, by Sidney; dam, Nettie Lambert.	San Mateo Stock Farm.	
Shamrock, by Buccaneer; dam, Fernleaf.	Dr. D. W. Stimpson.	

SUMMARY.

Sister V.....
 Pink.....
 Mary Lou.....
 Argent.....
 Shamrock.....

Time—2:24; 2:23½; 2:23½.

RACE No. 16—PACING.

Free for all. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
St. Patrick, by Volunteer; dam, by Guy Wilkes.	Marcus Daly.	Anacapa.
Ned Winslow, by Tom Benton; dam, Brown Jennie.	J. L. McCord.	San Mateo.
Almont Patchen, by Juniata; dam, Glidey.	Corey & Hanks.	San Mateo.

SUMMARY.

Almont Patchen.....
 Ned Winslow.....
 St. Patrick.....

Time—2:26½; 2:22; 2:19.

RACE No. 17—TROTTING.

For named horses. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Chancellor, by Bismarck; dam, Lucy.	R. D. Fox.	
Billy Emerson.	C. J. Heyler.	
Bessie S, by Prince Albert; dam, by Ethan Allen.	H. Singleton.	
Tommy T, by Nutwood; dam, Orphan Belle.	W. S. Taylor.	
Lady Grosvenor, by Grosvenor; dam, Lady Nutwood.	E. Topham.	
Rockwood, by Woodnut.	C. H. Corey.	

SUMMARY.

Chancellor.....
 Rockwood.....
 Susie S.....

Time—2:36; 2:35; 2:36; 2:35; 2:29½; 2:29½; 2:30.

SPECIAL TROTTING.

Stake. Ten dollars entrance.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Albert W; dam, by San Bruno.	H. G. Cox.	San José.
by Nutwood; dam, by Jack Roberts.	G. W. Barstow.	San José.
by Chrisman's Hambletonian; dam, by Taylor.	Owens Bros.	Fresno.

SUMMARY.

Grove R.....1
 Lee G.....2
 Byron.....dis.

Time—2:29.

34th

TRANSACTIONS

OF THE

SIXTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Los Angeles and Ventura.

OFFICERS OF THE ASSOCIATION.

L. LICHTENBERGER.....

BEN BENJAMIN.....

E. F. SPENCE.....

DIRECTORS.

R. R. BROWN (128 South Spring Street).....

H. W. HEINSCH.....

J. W. ROBINSON.....

GEORGE HINDS.....

J. C. NEWTON.....

E. T. WRIGHT.....

L. LICHTENBERGER.....

L. J. ROSE, JR.....

REPORT.

LOS ANGELES, December 1, 1890.

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Sixth District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

BEN BENJAMIN,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

By gate and grand stand, August	\$3,844 65
By gate and grand stand, October	2,879 75
By forfeit money collected	135 00
By privileges, August meeting	4,447 15
By privileges, October meeting	3,073 65
By State appropriation	3,500 00
By First National Bank, on note	2,900 00
By sale of property	6,750 00
By rent	1,306 00
By entrance money	5,402 50

Expenditures.

For unpaid premiums, 1889	\$130 90
For unpaid premiums, 1889	72 00
For note of J. W. Robinson	1,716 00
For advertising spring and August meeting	632 75
For attorney's fees	335 00
For attorney's services (old debt)	400 00
For lithographs	185 35
For employees, August meeting	404 00
For purses and stakes, August meeting	10,387 50
For incidentals, August meeting	239 25
For police patrol	100 75
For band and wagon	255 00
For hay and straw	130 00
For American Trotting Association (forfeits)	206 00
For Blood Horse Association (forfeits)	60 00
For return of entrance money	25 00
For architect for services	60 00
For labor at track	15 00
For overdraft from 1889	1,545 08
For interest	31 43
For insurance	296 00
For Secretary's salary	501 30
For office rent	96 00
For printing, August meeting	99 50
For carpentering	244 50
For improvements at track	3,029 25
For papering club house	110 00
For lumber	1,164 43
For hardware bills	107 10
For plumbing	59 73
For barbed wire and water pipes	288 35
For water piping, etc.	131 00
For purses and stakes, October meeting	5,376 40
For payroll	372 30
For police patrol	70 00
For advertising fair	548 50
For printing, October meeting	71 30
For band and wagon	275 00
For balloon ascensions	200 00
For Superintendent of Pavilion	150 00
For ladies' tournament	60 00
For street sprinkling	18 00
For bill posting	15 75
For water supply	24 00
For hay and straw, October meeting	135 00
For labor at track	20 00
For insurance	157 75
For incidentals, October meeting	53 50
For premiums at Pavilion	884 00
For premiums at Park	1,551 50

PREMIUMS AWARDED—1890.

DIVISION A—HORSES.

Exhibit.	Exhibitor.	Address.	Award.
I—THOROUGHBREDS—STALLIONS.			
Deer, two years old	J. Gries	Compton	\$15 00
Hocking, Jr., two years old	Francisco Estudillo	San Jacinto	\$8 00
Ryan, suckling	J. Gries	Compton	\$10 00
MARES.			
Appleby, four years old and over	W. L. Appleby	Santa Clara	\$20 00
Gries, four years old and over	J. Gries	Compton	\$10 00
Estudillo, two years old	Francisco Estudillo	San Jacinto	\$10 00
Gries, two years old	J. Gries	Compton	\$5 00
Gries, one year old	J. Gries	Compton	\$8 00
Gries and two colts	J. Gries	Compton	\$20 00
II—STANDARD BRED—STALLIONS.			
Durfee, four years old and over	C. A. Durfee	Los Angeles	\$25 00
Snodgrass, four years old and over	L. Snodgrass	Los Angeles	\$15 00
Williams, three years old	Elias Williams	Los Angeles	\$20 00
Robinson, two years old	J. W. Robinson	Edgemont Park	\$15 00
Durfee, two years old	C. A. Durfee	Los Angeles	\$8 00
Robinson, one year old	J. W. Robinson	Edgemont Park	\$12 00
Gries, one year old	J. Gries	Compton	\$8 00
Robinson, suckling colt	J. W. Robinson	Edgemont Park	\$6 00
MARES.			
Robinson, four years old and over	J. W. Robinson	Edgemont Park	\$20 00
Robinson, two years old	J. W. Robinson	Edgemont Park	\$10 00
Henrietta St'k Farm, two years old	Henrietta St'k Farm	Compton	\$5 00
Robinson, suckling colt	J. W. Robinson	Edgemont Park	\$6 00
Robinson, with suckling colt	J. W. Robinson	Edgemont Park	\$15 00
FAMILIES.			
Snodgrass and five colts	L. Snodgrass	Los Angeles	\$30 00
Durfee and two colts	C. A. Durfee	Los Angeles	\$20 00
Robinson and two colts	J. W. Robinson	Edgemont Park	
III—ROADSTERS—STALLIONS.			
Williams, four years old and over	Elias Williams	Williams	\$25 00
Grant Bros., four years old and over	Grant Bros.	Los Angeles	\$12 00
Newton, two years old	J. C. Newton	Farmdale	\$15 00
Tyer, two years old	James A. Tyer	Rivera	\$8 00
Newton, one year old	J. C. Newton	Farmdale	\$12 00
Newton, suckling	J. C. Newton	Farmdale	
Williams, suckling	Elias Williams	Los Angeles	\$4 00
MARES.			
Durfee, four years old and over	C. A. Durfee	Los Angeles	\$15 00
Tyer, three years old	S. Tyler	Pasadena	\$12 00
Rose, three years old	A. Rose	Ballona	\$6 00
Rose, two years old	A. Rose	Ballona	\$10 00
Rose, one year old	A. Rose	Ballona	\$8 00
Weed, one year old	F. F. Weed	Santa Fe Springs	\$4 00
Rose, suckling	A. Rose	Ballona	\$6 00
GELDINGS.			
Small, two years old	H. E. Small	Los Angeles	\$10 00
Small, two years old	H. E. Small	Los Angeles	\$5 00
Newton, one year old	J. C. Newton	Farmdale	\$8 00

DIVISION A—Continued.

Exhibit.	Exhibitor.	Address.
FAMILIES.		
Clara D and suckling colt.....	J. C. Newton.....	Farmdale.....
Turk and suckling colt.....	A. Rose.....	Ballona.....
Goldnut and five colts.....	Elias Williams.....	Los Angeles.....
Barney Clifton and five colts.....	James De Zell.....	Los Angeles.....
Nellie Hill and two colts.....	S. Snodgrass.....	Los Angeles.....
Clara D and two colts.....	J. C. Newton.....	Farmdale.....
CLASS IV.		
Brandy and Soda, matched road horses.....	A. B. Anderson.....	San Gabriel.....
Nellie and Dixey, matched road horses.....	Ed. Ryan.....	Los Angeles.....
Iono, single horse in harness.....	N. A. Covarrubias.....	Los Angeles.....
Rowdy Boy, single horse in harness.....	N. A. Covarrubias.....	Los Angeles.....
CLASS V—CARRIAGE HORSES.		
Sherry and Bitters.....	A. B. Anderson.....	San Gabriel.....
Bessie and Bab.....	F. Estudillo.....	San Jacinto.....
CLASS VI—PONIES.		
Cupid, three years old and over.....	J. W. Gardner.....	Los Angeles.....
Rats, three years old and over.....	G. L. Waring.....	Santa Monica.....
Fancy and Fairy, matched ponies.....	J. W. Gardner.....	Los Angeles.....
Fairy, single pony in harness.....	A. B. Anderson.....	San Gabriel.....
CLASS VII—SADDLE HORSES.		
Sir Ladd.....	A. B. Anderson.....	San Gabriel.....
Claudia.....	Myer Lewis.....	Los Angeles.....
CLASS VIII.		
Bess, three years old and over.....	Isaac Kean.....	Pasadena.....
CLASS IX—DRAFT HORSES—STALLIONS.		
Morton Tom, three years old and over.....	Holbert & Conger.....	Ballona.....
Passe Partout, three years old and over.....	Celestin & Gormley.....	Los Angeles.....
Monitor, two years old.....	J. G. Denman.....	Norwalk.....
MARES.		
Emma, three years old and over.....	J. G. Denman.....	Norwalk.....
Mary, three years old and over.....	J. G. Denman.....	Norwalk.....
SPECIAL CLASS—CLEVELAND BAYS.		
Best stallion.....	Henrietta St'k Farm.....	Wilmington.....
Second best.....	Holbert & Conger.....	Ballona.....

DIVISION B—CATTLE.

Exhibit.	Exhibitor.	Address.
CLASS I—DURHAMS—BULLS.		
5th Kirklevington of Forest Home, three years old and over.....	C. Younger & Son.....	San José.....
44th Kirklevington of Forest Home, two years old.....	C. Younger & Son.....	San José.....
Belle's Duke of Forest Home, one year old.....	C. Younger & Son.....	San José.....
Rose's Duke of Forest Home, one year old.....	C. Younger & Son.....	San José.....
58th Kirklevington of Forest Home, under one year.....	C. Younger & Son.....	San José.....
2d Duke of Airdrie's Cherry, under one year.....	C. B. Woodhead.....	Los Angeles.....

DIVISION B—Continued.

Exhibit.	Exhibitor.	Address.	Award.
COWS.			
Forest Home, three years old and over.....	C. Younger & Son.....	San José.....	\$20 00
Forest Home, three years old and over.....	C. Younger & Son.....	San José.....	\$10 00
Rose 12th, two years old.....	C. Younger & Son.....	San José.....	\$15 00
Maynard, one year old.....	C. Younger & Son.....	San José.....	\$10 00
Rose 16th, under one year.....	C. Younger & Son.....	San José.....	\$8 00
Maynard 7th, under one year.....	C. Younger & Son.....	San José.....	\$4 00
HERD.			
Two years old and over.....	C. Younger & Son.....	San José.....	\$20 00
CLASS II—JERSEYS—BULLS.			
Three years old and over.....	J. D. Durfee.....	El Monte.....	\$20 00
Three years old and over.....	L. S. Syme.....	Pasadena.....	\$10 00
Two years old.....	J. D. Durfee.....	El Monte.....	\$15 00
Ort, one year old.....	Mrs. J. E. Ellis.....	Los Angeles.....	\$10 00
Scott, one year old.....	H. Locke.....	Los Angeles.....	\$6 00
Under one year.....	J. D. Durfee.....	El Monte.....	\$8 00
Finger Sullar, under one year.....	C. B. Woodhead.....	Los Angeles.....	\$4 00
COWS.			
Three years old and over.....	C. B. Woodhead.....	Los Angeles.....	\$20 00
Three years old and over.....	J. D. Durfee.....	El Monte.....	\$10 00
Two years old.....	J. D. Durfee.....	El Monte.....	\$15 00
Queen, two years old.....	L. S. Syme.....	Pasadena.....	\$8 00
One year old.....	J. D. Durfee.....	El Monte.....	\$10 00
One year old.....	J. D. Durfee.....	El Monte.....	\$6 00
Under one year.....	L. S. Syme.....	Pasadena.....	\$8 00
Under one year.....	Mrs. J. E. Ellis.....	Los Angeles.....	\$4 00
HERDS.			
Over two years old.....	J. D. Durfee.....	El Monte.....	\$20 00
Over two years old.....	C. B. Woodhead.....	Los Angeles.....	\$10 00
CLASS III—HOLSTEINS—BULLS.			
Wit's Mirick, three years old and over.....	A. Rose.....	Ballona.....	\$20 00
Wit's Mirick, three years old and over.....	C. B. Woodhead.....	Los Angeles.....	\$8 00
COWS.			
Veerman, three years old and over.....	L. S. Syme.....	Pasadena.....	\$20 00
Three years old and over.....	C. B. Woodhead.....	Los Angeles.....	\$10 00
Ambassadors, two years old.....	C. B. Woodhead.....	Los Angeles.....	\$15 00
CLASS VI—GRADED COWS.			
Three years old and over.....	A. Rose.....	Ballona.....	\$15 00
Three years old and over.....	C. Younger & Son.....	San José.....	\$8 00
Two years old.....	L. S. Syme.....	Pasadena.....	\$8 00
Two years old.....	J. D. Durfee.....	El Monte.....	\$4 00
One year old.....	J. D. Durfee.....	El Monte.....	\$5 00
One year old.....	J. D. Durfee.....	El Monte.....	\$3 00
One year old.....	J. D. Durfee.....	El Monte.....	\$4 00
CLASS VII—GUERNSEYS—BULLS.			
Springtide, two years old.....	Sessions & Bigelow.....	Lynwood.....	\$10 00
Fauntleroy, one year old.....	Sessions & Bigelow.....	Lynwood.....	\$10 00
COWS.			
Reel, three years old and over.....	Sessions & Bigelow.....	Lynwood.....	\$10 00
Reel, three years old and over.....	Sessions & Bigelow.....	Lynwood.....	\$5 00
Two years old.....	Sessions & Bigelow.....	Lynwood.....	\$10 00
Under one year.....	Sessions & Bigelow.....	Lynwood.....	\$5 00
HERD.			
.....	Sessions & Bigelow.....	Lynwood.....	\$10 00

DIVISION H—Continued.

Exhibit.	Exhibitor.	Address.
Best fancy shell work	Miss Phil. S. Flores	Los Angeles
Best point lace handkerchief	Mrs. Jas. Cumpston.	Los Angeles
Best Spanish embroidery	Mrs. L. P. Millar	Los Angeles
Best crochet work	Mrs. Mamie Chick	Los Angeles
Best shell work	Mrs. McIlmuid	Los Angeles
Best kid gloves	Mrs. L. V. Voorhees	Los Angeles

DIVISION I—FANCY WORK.

Exhibit.	Exhibitor.	Address.
Best three pillow cases	Mary Gridley	Los Angeles
Best bed-room set, crazy work	Anna M. Workman	Los Angeles
Best crochet baby skirt	Angelina Greleck	Los Angeles
Display of birds' eggs	Arthur C. Outtrinn	Fulton Wells
Best display of birds' eggs	Charley and Frank Bledsoe	Los Angeles
Best display of moss and shell work	Jessie Millar	Los Angeles
Best etching	Jessie Millar	Los Angeles
Best fancy tidy	Jessie Millar	Los Angeles
Best luster painting	Jessie Millar	Los Angeles
Best kensington banner	Jessie Millar	Los Angeles

DIVISION J—FINE ARTS.

Exhibit.	Exhibitor.	Address.
Best landscape.....	Mrs. Fannie Dietz ..	Los Angeles.....
Best fruit piece	Miss Pearl Lettelier ..	Los Angeles.....
Best pastel portraits	J. Abbertus.....	Los Angeles.....
Pastel portraits.....	J. Abbertus.....	Los Angeles.....
Best water colors	J. Abbertus.....	Los Angeles.....
Crayon portraits.....	J. N. Hanson.....	Santa Ana.....
Best landscape.....	Miss M. E. Donnell.....	Los Angeles.....
Best floral pieces	Miss Edith White.....	Los Angeles.....
Fruit piece	Miss F. E. Duwall.....	Los Angeles.....
Best painting of figs.....	Mrs. Ellen B. Farr.....	Pasadena.....
Best painting of poppies	Mrs. Ellen B. Farr.....	Pasadena.....
Best bisque vases	Mrs. M. Cicotte.....	Los Angeles.....
Best brass and fine copper engraving.....	Miss M. N. Morrison ..	Los Angeles.....
Best amateur photography.....	C. L. Roberts.....	Cahuenga.....
Wood plaques	Mrs. J. N. Patterson ..	Los Angeles.....
Wood plaques	Miss Jessie Goodwin ..	Los Angeles.....
Fruit painting.....	Mrs. N. Catching.....	Los Angeles.....
Best orange in oil on canvas.....	Mrs. N. Catching.....	Los Angeles.....
Best portraits.....	Miss E. G. Sawtelle.....	Los Angeles.....
Portraits.....	Miss E. G. Sawtelle.....	Los Angeles.....
Best oil painting of animals.....	C. B. Owens.....	Los Angeles.....
Oil painting of fruits.....	C. B. Owens.....	Los Angeles.....
Floral pieces	Mrs. R. P. Ingram.....	Los Angeles.....
Best decorated china	Mrs. D. E. Russell.....	Los Angeles.....
Best frames, etc.....	Kugemann & Lichtenberger ..	Los Angeles.....
Best display of photography.....	F. G. Schumacher.....	Los Angeles.....
Best display of crayon portraits	F. G. Schumacher.....	Los Angeles.....
Display of photography	Steck & Lamson.....	Los Angeles.....
Best wood plaques.....	Mrs. J. H. Crawford.....	Los Angeles.....
Best display of crayon portraits	Mrs. M. E. Macleod.....	Los Angeles.....
Best study from life.....	Mrs. M. E. Macleod.....	Los Angeles.....
Water-color landscape.....	Mrs. M. E. Macleod.....	Los Angeles.....
Water-color landscape.....	Mrs. M. E. Macleod.....	Los Angeles.....

DIVISION K—VEGETABLES, ETC.

Exhibit.	Exhibitor.	Address.	Award.
onions	J. N. Miller	Artesia	\$4 00
new onions	J. N. Miller	Artesia	\$4 00
pumpkin	F. R. Slaughter	University	Diploma.
melons	D. Curry	Norwalk	\$4 00
potatoes	J. T. Haddox	El Monte	\$5 00
stalk and cocoons	Mrs. Mamie Chick	Los Angeles	\$5 00
beans	E. Dane	Pasadena	\$4 00
potatoes.	John Branch	Artesia	\$5 00
new corn	R. E. Larter	Westminster	\$5 00
lay of pumpkins	Geo. Rogers	Westminster	\$5 00
lay of potatoes	Frank Cook	Westminster	\$3 00
greatest variety of potatoes.	Frank Cook	Westminster	\$5 00
beets	Mrs. Musselman	Westminster	\$10 00
hard squash	R. E. Larter	Westminster	\$4 00
neck squash	McFadden & Bentley	Westminster	\$4 00
beans	A. Butterfield	Westminster	\$4 00
beans for pickling	S. J. Murdock	Westminster	\$4 00
beans in pod	O. E. Roberts	Cahuenga	\$4 00
eggplant	N. Reifsnyder	Fruitland	\$4 00
atoes	H. Reifsnyder	Fruitland	\$4 00
ish muskmelons	Henry Claussen	Los Angeles	\$4 00
ish muskmelons	Henry Claussen	Los Angeles	\$4 00
varieties wheat	C. N. Wilson	San Fernando	\$5 00
ale of rye	C. N. Wilson	San Fernando	\$5 00
peas	C. N. Wilson	San Fernando	\$4 00
pump	C. N. Wilson	San Fernando	\$4 00
new squash	C. N. Wilson	San Fernando	\$4 00
lay	C. N. Wilson	San Fernando	\$4 00
hundred pounds flour	Olive Milling Co.	Olive	\$5 00
est	E. T. Barber	Antelope Valley	\$5 00
the corn	J. N. Miller	Artesia	\$5 00
et of flowers	Annie Workman	Los Angeles	\$3 00
beets	T. Weisendanger	Englewood	Diploma.
largest display of roses	Mrs. S. D. Spears	East Los Angeles	\$10 00
lay of flowers and plants.	J. E. Boyce	Santa Monica	Diploma.
display of vegetables.	Merchants Com. Co.	Los Angeles	Diploma.

DIVISION L—BUTTER, CHEESE, ETC.

Exhibit.	Exhibitor.	Address.	Award.
Largest variety of cheese.	Anderson Rose	Ballona	\$15 00
Best cheese.	Mitchell & Harshman	Downey	Diploma.
Best cheese.	J. W. Patterson	Artesia	\$5 00
Best milk.	Stephens & Co.	Los Angeles	Diploma.
Best cane molasses	Orange County Molasses Co.	Buena Park	Diploma.
Best butter.	Sessions & Bigelow	Los Angeles	\$10 00
Best butter.	T. J. Kerns	Downey	\$5 00
Best cane molasses	T. W. Mendenhall & Son	Whittier	Diploma.
Best cane molasses	James A. McFadden	Westminster	Diploma.

DIVISION M—FRUIT.

Exhibit.	Exhibitor.	Address.
Five varieties apples.....	Vernon Bros.....	Whittier.....
Best three varieties lemons.....	Theo. Pinthel.....	Santa Ana.....
Best jellies.....	Mrs. S. A. Crane.....	Duarte.....
Best jellies and jams.....	Hoyle Bros.....	Los Angeles.....
Best display of catsup.....	Philbrook & Stetson.....	Pasadena.....
Best orange and lemon juice.....	Philbrook & Stetson.....	Pasadena.....
Best sun-dried figs.....	Jas. Root.....	Rivera.....
Chowchow and prepared mustard.....	Home Pickling and Preserving Co.....	Pasadena.....
Best evaporated apricots.....	S. R. Thorp.....	Los Angeles.....
Largest pear.....	Chas. Picot.....	Los Angeles.....
Best display of Kelsey Japan plums.....	Mark Brantle.....	Covina.....
Best display of guavas.....	H. Stoll.....	Cahuenga.....
Best display of soft and hard-shell almonds.....	E. P. Norwood.....	Cucamonga.....
Best display of Italian chestnuts.....	E. P. Norwood.....	Cucamonga.....
Best display of three varieties figs.....	E. Dane.....	Pasadena.....
Best display of dried peaches.....	E. Dane.....	Pasadena.....
Best display of seedless raisins.....	E. Dane.....	Pasadena.....
Best crystallized fruits.....	Bishop-Loop Co.....	Los Angeles.....
Seven varieties apples.....	John Branch.....	Artesia.....
Best three varieties pears.....	John Branch.....	Artesia.....
Best citron of commerce.....	John Branch.....	Artesia.....
Best display of oranges.....	Ernest Watson.....	Duarte.....
Best imperial limes.....	A. C. Thompson.....	Duarte.....
Best general variety of apples.....	T. J. Kerns.....	Downey.....
Best quinces.....	T. J. Kerns.....	Downey.....
Dried peaches.....	Henry Englehart.....	Glendora.....
Sun-dried apricots.....	Henry Englehart.....	Glendora.....
Best twenty-five pounds nectarines.....	E. A. Borine.....	Lamanda Park.....
Best fifty pounds English walnuts.....	G. W. Ford.....	Santa Ana.....
Best seven varieties apples.....	Mrs. Lyman.....	Westminster.....
Best five varieties apples.....	McFadden & Bentley.....	Westminster.....
Best general display of apples.....	Mrs. Lyman.....	Westminster.....
Best three varieties figs.....	H. Carlysle.....	Westminster.....
Best general display of pears.....	H. Carlysle.....	Westminster.....
Best general variety of plums.....	O. J. Buck.....	Westminster.....
Best eight varieties table grapes.....	Cyrus Kinney.....	Fillmore.....
Best general display of table grapes.....	Cyrus Kinney.....	Fillmore.....
Largest display of fruit in glass.....	W. R. Baker.....	Pasadena.....
Best display of jellies and jams.....	W. R. Baker.....	Pasadena.....
Best display of fruit in glass.....	Mrs. S. A. Crane.....	Duarte.....
Best display of prunes (dried).....	Bliss Bros.....	Duarte.....
Best display of plums (dried).....	Bliss Bros.....	Duarte.....
Best three varieties table grapes.....	H. Reifsnyder.....	Fruitland.....
Best three varieties lemons.....	H. Claussen.....	Cahuenga.....
Best fifty pounds English walnuts.....	C. H. Coffman.....	Rivera.....
Best strawberries.....	R. Baldridge.....	Covina.....
Best district display.....	Ventura District.....	Ventura.....
District display.....	Westminster District.....	Westminster.....
Best one variety lemons.....	N. W. Blanchard.....	Santa Paula.....

DIVISION O.

Exhibit.	Exhibitor.	Address.	Award.
Display of semi-tropical trees.....	C. H. Judd.....	Glendora.....	\$20 00
Display of packages for shipping.....	Los Angeles Box Co.....	Los Angeles.....	\$5 00
Display of canned baked beans, mince meat, plum pudding, beans.....	Philbrook & Stetson.....	Pasadena.....	Diploma.
Display of banana tree fruit.....	J. S. Blake.....	Los Angeles.....	Diploma.
Display of banana tree fruit.....	E. O. Roberts.....	Cahuenga.....	\$10 00
Display of olive trees.....	John S. Calkins.....	Pomona.....	Diploma.
Plaster.....	Alpine P. & C. Co.....	Los Angeles.....	Diploma.
Plaster.....	Alpine P. & C. Co.....	Los Angeles.....	Diploma.
Plaster.....	Alpine P. & C. Co.....	Los Angeles.....	Diploma.

DIVISION N—BEES, HONEY, ETC.

Exhibit.	Exhibitor.	Address.
Most attractive display of comb and honey.....	L. E. Mercer & Sons.....	Ventura.....
Best display of extracted honey.....	L. E. Mercer & Sons.....	Ventura.....
Best swarm of Italian bees, in glass.....	L. E. Mercer & Sons.....	Ventura.....
Best general display of bees and honey.....	L. E. Mercer & Sons.....	Ventura.....
Most attractive display of comb honey.....	C. N. Wilson.....	San Fernando.....
Best display of extracted honey.....	C. N. Wilson.....	San Fernando.....
Best specimen of comb formation.....	C. N. Wilson.....	San Fernando.....
Swarm of Italian bees, in glass.....	C. N. Wilson.....	San Fernando.....

SPEED PROGRAMME.

RACE No. 1—RUNNING.

The Nursery Stake. A sweepstake for two-year olds who have never won a stake. Twenty-five dollars each; fifteen dollars forfeit; one hundred and fifty dollars added; the second to receive seventy-five dollars out of the stake. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mystery, by Three Cheers	J. B. Chase	San Francisco
Zingarella, by Ed Corrigan	A. S. Ashe	Los Angeles
Seminola, by Hindoo	L. J. Rose	San Francisco
Cheerful, by Three Cheers	Fashion Stable	San Francisco
Centenella, by Hock Hocking	Francisco Estudillo	San Francisco
Lulu H, by Reveille	J. G. Hill	San Francisco

SUMMARY.

Mystery
Zingarella
Seminola

Time—0:49.

RACE No. 2—RUNNING.

The Pomona Stake. A sweepstake for all ages. Thirty dollars each, h. f.; two hundred and fifty dollars added; the second to receive one hundred dollars out of the stake. Winners of two races this year to carry five pounds, and three races eight pounds. Non-winners this year allowed six pounds; maidens allowed twelve pounds. One sixteenth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Gladiator, by Grinstead	Santa Anita Stable	San Francisco
Minuet, by Rayon D'Or	L. J. Rose	Los Angeles

SUMMARY.

Minuet
Gladiator

Time—1:50½.

RACE No. 3—TROTTING.

2:28 Class. Purse, six hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lucy R, by Sultan	Walter Maben	Los Angeles
McKenny, by Alcyone	C. A. Durfee	Los Angeles
Dick Richmond, by A. W. Richmond	Sanchez Bros.	San Francisco
Jim Leach, by Inca	Wyat Earp	San Francisco
Bashaw, by Wapsie	H. Delaney	San Francisco

SUMMARY.

Lucy R.	3	1	1	2	2	1
Jim Leach	1	2	2	3	1	2
McKenny	2	3	3	1	3	3
Bashaw	4	dis.				

Time—2:20½; 2:22½; 2:23½; 2:27; 2:28½; 2:26½.

RACE No. 4—SPECIAL.

Two ponies. One quarter of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
	J. B. Proctor	Santa Monica.
	R. P. Carter	Santa Monica.
	J. Haigh	Santa Monica.
	G. L. Waring	Santa Monica.
	E. B. Woodhouse	Santa Monica.

SUMMARY.

	1
	2
	3

RACE No. 5—RUNNING.

Winters Cup. A sweepstake for all ages. Thirty dollars each, h. f.; two hundred and fifty dollars added; second to receive seventy dollars out of the stakes. Winner of any race August 1, 1890, at three quarters of a mile or less, to carry five pounds, and two or three races, eight pounds extra. Horses beaten once this year at any distance five pounds; twice, eight pounds; and three or more times, ten pounds. Maidens five pounds. One half mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Robbery Boy	Juan B. Arrelanes	Santa Maria.
Wildie	Gus. Walters	Los Angeles.
	A. Sproul	Norwalk.

SUMMARY.

	2	1	1
	1	2	2
	3	3	r. o.

Time—0:49½; 0:48½; 0:49½.

RACE No. 6—RUNNING.

Handicap. A sweepstake for all ages. Forty dollars each, h. f.; two hundred and fifty dollars added; the second to receive one hundred dollars, and the third, fifty dollars out of the stakes. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wanderer	L. J. Rose	Los Angeles.
by Grinstead	Santa Anita Stable	Santa Anita.
by Milner	Matt. Storn	Sacramento.
by Hock Hocking	A. B. Anderson	San Gabriel.
by Wanderer	John Forster	Los Angeles.

SUMMARY.

Naicho B.
 Marigold
 Rico

Time—2:08½.

RACE No. 7—TROTTING.

3:00 Class. Purse, four hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.
Caliph, by Pasha	Thomas Story
Orphan Girl, by Del Sur	H. T. Rudisell
Carrie S, by French horse	A. Sproul
Sultandin, by Sultan	Dr. C. Edgar Smith
Alco, by Albion	Chino Ranch

SUMMARY.

Orphan Girl 3 3 1 2 1
 Carrie S 2 2 2 1 1
 Alco 4 4 3 3 3
 Sultandin 1 1 4 4 4

Time—2:52½; 2:31½; 2:32½; 2:36; 2:37; 2:37½.

RACE No. 8—RUNNING.

The Junior Stake. A sweepstake for two-year olds. Thirty dollars each, two forfeit; two hundred dollars added; the second horse to receive one hundred of the stakes. Colts to carry one hundred and fifteen pounds, and fillies one hundred and twelve pounds. The winner of any race exclusively for two of the value of four hundred dollars, to carry three pounds extra; of two such pounds; and of three such races, twelve pounds extra. Horses beaten once, pounds; twice, ten pounds; three or more times, twelve pounds. Three mile.

Name and Pedigree of Horse.	By Whom Entered.
Peri, by Flood	Dave Bridges
Cheerful, by Three Cheers	Fashion Stable
Mystery, by Three Cheers	J. B. Chase
Hock Hocking, Jr., by Hock Hocking	Francisco Estudillo
Conrad, by Flood	L. J. Rose

SUMMARY.

Mystery
 Conrad
 Peri

Time—1:14½.

RACE No. 9—RUNNING.

Handicap. A sweepstake for three-year olds. Thirty dollars each, h. f.; dollars added; the second to receive seventy-five dollars out of the stakes.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	L. J. Rose	Los Angeles.
.....	Matt. Storn	Sacramento.
.....	W. L. Appleby	Santa Clara.

SUMMARY.

Handicap 1
 2
 3

Time—1:42½.

RACE No. 10—MIXED.

Purse of one hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	C. A. Durfee	Los Angeles.
.....	George Hinds	Wilmington.
.....	J. Garrity	San Francisco.

SUMMARY.

..... 1 1 2 1
 2 3 1 2
 O'More 3 2 3 3

Time—2:24; 2:24½; 2:27; 2:25.

RACE No. 11—RUNNING.

Purse. Two hundred dollars; ten dollars from starters to go to second horse. Sixteenth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	Matt. Storn	Sacramento.
.....	John Forster	Los Angeles.
.....	Maltese Villa Stable	Merced.

SUMMARY.

Naicho B. 1
 2
 3

Time—1:48.

RACE No. 12—RUNNING.

The Santa Barbara Handicap. Purse, seven hundred dollars; of which one hundred dollars to the first horse; one hundred and fifty dollars to second; fifty dollars to third; twenty dollars to nominate, and forty dollars more from all starters. Three miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Peri	David Bridges	Los Angeles.
Conrad	L. J. Rose	San Gabriel.
Kildare	Matt. Storn	Los Angeles.
Dan Murphy	Gus Walters	Los Angeles.

SUMMARY.

Peri

Dan Murphy

Kildare

Time—1:14½.

RACE No. 13—PACING.

Purse, five hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Silkwood	J. Willetts	San Gabriel.
Hummer	J. Garrity	San Gabriel.

SUMMARY.

Silkwood

Hummer

Time—2:18½; 2:20; 2:20.

RACE No. 14—RUNNING.

The San Bernardino Handicap. A sweepstake for two-year olds. Thirty dollars each, h. f.; two hundred dollars added; the second to receive one hundred dollars of the stakes. Seven eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mystery	Matt. Storn	Los Angeles.
Peri	Dave Bridges	Los Angeles.

SUMMARY.

Peri

Mystery

RACE No. 15—RUNNING.

Anna Stake. A sweepstake for all ages. Forty dollars each, h. f.; two hundred dollars added; the second to receive one hundred dollars out of the stakes. Two miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Milner	Matt. Storn	Sacramento.
by Hock Hocking	A. B. Anderson	San Gabriel.
by Wanderer	John Forster	Los Angeles.

SUMMARY.

Harigold

by Hock B.

Four Aces

Time—3:30½.

RACE No. 16—TROTTING.

Purse, five hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	L. Lehman	Hueneme.
.....	J. G. Denman	Norwalk.
.....	Chino Ranch	Chino.

SUMMARY.

.....

.....

.....

Time—2:29½; 2:30½.

TRANSACTIONS

OF THE

TENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Monterey and San Benito.

REPORT.

SALINAS CITY, December 1, 1890.

OFFICERS OF THE ASSOCIATION.

J. D. CARR
JOHN J. KELLY
WM. VANDERHURST.....

DIRECTORS.

J. D. CARR
J. B. IVERSON
M. LYNN.....
H. S. BALL.....
DR. THOS. FLINT.....
D. G. McLEAN.....
J. H. McDOUGALL.....
B. V. SARGENT.....

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Seventh District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

JOHN J. KELLY,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

Amount on hand	\$1,120 55
Amount of Pavilion	200 00
Amount of privileges	722 25
Single admission tickets	1,187 00
Grand stand	78 50
Annual membership	495 00
Season tickets	96 00
Back badges	70 00
Advance money	798 00
State warrant	2,000 00
Amount overdrawn	187 38
	<u>\$6,949 68</u>

Expenditures.

Prizes and purses	\$2,927 00
Account	1 50
Printing and advertising	313 50
Music	150 00
Food and water	94 80
Material	2,700 78
Car	639 55
Insurance	82 50
National Trotting Association	31 10
Freight, postage, and expressage	8 96
	<u>\$6,949 68</u>

ANNUAL ADDRESS.

DELIVERED AT THE PAVILION, OCTOBER 3, 1890.

By REV. JOSEPH EMERY.

MR. PRESIDENT, LADIES AND GENTLEMEN: Only on Tuesday of the present week did I receive an invitation from the Board of Directors to address you on this occasion.

The shortness of time precludes the probability of delivering a carefully prepared speech, accompanied by satisfactory statistics of the productions of the year.

The material resources of a State or nation are largely in its soil. Out of it spring vast forests, affording a thousand varieties of wood for the multiplied uses of man.

From the earth's bosom grow the harvests of the world for the sustenance of the race, and grasses in rich abundance for the unnumbered flocks and herds that swarm over its surface.

From her rock-ribbed sides are hewn the material for the foundations of our private dwellings and public buildings. Beneath the surface are hid away billions of tons of coal for fuel; and in the Devonian strata are vast reservoirs of petroleum, yielding millions of gallons annually to light our homes. And seamed and woven in the sandstone, and porphyry rocks are found the vast mineral deposits of iron and copper, brass and platinum, silver and gold.

What a wonderful planet is ours, and how well adapted for the habitation of man! And how blessed are we to have our being at the present time and place, amidst the closing events of the nineteenth century, and at the occident of the new world, the most favored spot on the broad surface.

What are the purposes to be accomplished by this association?

Men and women organize into societies bound together by covenants and by-laws for certain specific aims and ends. Organized by the spirit of the hour.

Men are combining in compacts, societies, associations, in every department of human pursuit or calling, and, right or wrong, for some purpose in all these combinations.

Why this association, over which, Mr. President, you have been asked to preside? Why this large outlay of money for the erection of a spacious hall, and for the purchase and equipment of the elegant grounds on the borders of our city?

Not merely that our citizens may come together and have a social gathering, and bring with them the results of their industry and compete for premiums offered; or for the trial of strength or speed of your athletes.

Yours is a more laudable purpose. The object of this association is to illustrate, encourage, and promote the progress of agriculture, horticulture, stock raising, and the arts of husbandry, the counties of San Benito and Monterey, and thus aid in the development of the rich and varied material resources of this section.

and growing commonwealth. May heaven crown your efforts with success.

You are laying the foundations for future results. The work may be hard, reverses, oppositions, difficulties, impede your efforts, and present may often be discouraging, but grow not weary in well doing. You are called to sow and plant—others may reap—but when the harvest comes sower and reaper shall rejoice together.

May you live to see these fertile valleys blossom as the rose, and the abundance of their luscious fruits rival the fabled gardens of the Hesperides.

AGRICULTURE.

Agricultural fairs are intended to encourage and stimulate this noble industry. Agriculture is defined as the "art of cultivating the soil and deriving from it those products that sustain life." It is the oldest of arts. "In ancient times the sacred plow employed the kings and the fathers of mankind." Adam was an agriculturist, and so was his first born, Cain. Eve was a horticulturist and Abel a keeper of flocks. The history of agriculture includes the history of civilization. It flourished in Egypt under the Pharaohs, in Greece, in the Roman Empire, and in Israel. After the downfall of Rome in the fourth century came the dark ages, during which the command of the master was law, and the plowshares were beaten into swords and the pruning knives into spears. During all these ages of feudalism agriculture was the basis of life, the farmer was a serf and a vassal, and Europe lay fallow. With the waking up of humanity in the sixteenth century, the era of the renaissance, the invention of printing, of the revival of letters, of the decay of feudalism, and of the settlement of America.

In the last forty years agriculture has made gigantic strides, and the invention of implements of husbandry has been marvelous. The hand rake, the scythe, the cradle, and the flail, all of which the humble speaker has used, have given way to the reaper, the mower, the rake, the self-binder, the header, and the thrasher.

ITS IMPORTANCE.

The importance of agriculture can scarcely be overestimated. All are dependent upon it for their daily sustenance. The king and the beggar, the soldier and the tramp, alike are fed from the resources of our plowmen and the remunerative labor of the husbandman. All that we have on the earth in its tide of human life anything but a wide sepulcher, and have their being and power only because the fields yield their produce to the patient toil of the tiller of the ground.

We might manage to live without merchants and manufacturers, without artists and mariners, without poets and philosophers, lawyers and without school teachers and preachers. We might possibly live after some sort the loss of demagogues and politicians, saloon keepers and prize fighters, dancing masters and organ grinders. We could even live without Congressmen, Governors, and Presidents, but surely we cannot live without plowmen. Suspend for a single month the world's practical agriculture, and the death shadow would settle down upon all the land, and famine, gaunt and haggard, would stalk up and down the earth and look in at every window, and the children, with hollow eyes and famished features, would cry in vain.

for bread. Agriculture supplies the rich blood that flows through the arteries and veins of commerce and trade. All other human suits and enterprises flourish just as the agriculturist succeeds.

Agriculture is adapted to all classes and ranks of society. The farmer himself, without any loss of dignity, could be an agriculturist. The majority of our Presidents cultivated the soil, retiring from the places of honor to their rural homes. We see Washington at Mount Vernon, cultivating his broad acres and stocking his farm with the finest breeds of horses, cattle, and sheep from the old world. We see Jefferson at Monticello, Jackson at the Hermitage, Buren at Kinderhook, Garfield at Mentor, Clay at Ashland, and Lincoln at Marshfield. History tells us that Cincinnatus was called from the plow to the Consulship at Rome; and when he defeated her enemies, he made her peace, he resigned his high place of honor and returned to the culture of his little farm by the Tiber.

In the pursuit of agriculture we find scope for all the powers of the brain, brawn, and heart. Varied and extensive knowledge is needed in order to be an intelligent and successful agriculturist, knowledge of chemistry, botany, fruit culture, entomology, and natural history.

AGRICULTURAL COLLEGES.

The General Government, twenty-five years ago, gave a million acres of land to each State and Territory in the Union, amounting to thirty thousand acres for each Representative in Congress, for the purpose of founding and equipping an agricultural college. These schools are the best sources of light and power to the agricultural interests of this country. In these schools of learning our young men should obtain that theoretical and practical knowledge of agriculture, in all its departments, which would enable them to bring into this field of labor—the most important ever pursued by man—a large fund of intelligence and well directed energy.

This is the need of the hour. The growth of agriculture in California along all lines, and especially in fruit culture, within the last decade has been phenomenal.

The citrus fruits of the southern part of the State surpass in production the West Indies and Florida. It is estimated that the production of the East this year will amount to four thousand carloads, worth \$2,000,000.

The grapes and raisins of Fresno, Napa, and Sonoma surpass those of France and Italy; the prune, plum, and peach of Santa Clara, Sonoma, and El Dorado those of New Jersey and Delaware; and the apples of Monterey the world.

Our horned cattle in numbers, and in dairy and beef qualities, surpass those of England and Scotland. Our sheep, in number and quality of wool, equal the flocks of Spain and Australia; and our bloodstock in beauty of form and fleetness of foot, surpass those of England, the far-famed Arabia; and our draft horses, in size, symmetry, and strength, equal those of Scotland, Germany, and France.

Our wheat by the million goes to all the markets of the world. Monterey and San Benito, in potential resources, are not a whit behind the foremost counties of the State.

In the mildness and healthfulness of her climate, in the richness of her soil, and in the great variety of her productions, giving diversity

to Monterey has no superior. All the cereals grow here; wheat in the middle and southern parts of the county, and barley and oats in the northern portion and along the coast. The yield of wheat this year will approximate one million five hundred thousand bushels, and that of barley eight hundred thousand centals.

Apples grow in great abundance, and the sugar beet has a larger quantity of saccharine substance than those grown in any other part of the State. Beet-sugar making is destined to become one of the leading industries of the county.

A great variety of fruits are raised here except that of the citrus. The apple especially flourishes. In variety, size, flavor, and richness of fruit is not surpassed even by the far-famed apples of Oregon. The products of fruits in the Pavilion—dried, canned, and green—speak for themselves.

FLOWERS AND PLANTS.

The climate and soil of Monterey are peculiarly adapted to the culture of the floral kingdom.

The delicate tints of spray and leaf, of petal and sepal, surpass all description. Heaven mixes her dyes with exquisite taste and sets the various colors of the lily and the rose with sunbeams, tempered by the softening cloud and the sea mist.

Our women cultivate more and more of these beautiful flowers, and they adorn and brighten the home.

Permit me to call your attention to the rich display of rare plants and flowers in the Pavilion, the exhibit of two or three of our elect ladies, namely that of Mrs. Dixon of Salinas, and Mrs. Hickman of San Juan Cañon. The former has growing in her garden one hundred and twenty-five varieties of roses, sixty varieties of dahlias, twenty-five varieties of Lady Washington geraniums, and twenty-five varieties of coleus, and of rare plants, fifty varieties of coleus, and fifteen varieties of cut flowers, with many others too numerous to name. She has on exhibit four hundred varieties of cut flowers.

DAIRY.

Dairying is an extensive and remunerative industry of the district, producing butter and cheese. These products command the highest prices in the San Francisco market. During the year there were shipped from Salinas station three hundred and sixty thousand pounds of butter and one hundred thousand pounds of cheese. It is safe to say that the Monterey County produced, during the year, seven hundred thousand pounds of butter and four hundred thousand pounds of cheese, at 20 cents per pound, would amount to \$220,000.

There were also shipped from Salinas station fifteen thousand dozen eggs, four hundred and eighty thousand dozen eggs, one hundred thousand pounds of green fruit, and three million pounds of sugar beets. The exhibit of breeds of cattle this year, though not large, is of a high grade, and indicates a commendable zeal in the improvement of our cattle.

Nothing, however, has the material progress of Monterey County shown more than in the marked improvement in the qualities of our stock. No better blood can be found in the State than flows in

the veins of our thoroughbreds, roadsters, and draft horses. And the latter we have the Normans and Clydesdales, also Cleveland Mambros, Vermont Patchens, and other noted roadsters.

There are rich mines of gold in our mountains, some of which being worked with profit to their owners. Coal has also been discovered in large quantity, awaiting capital and enterprise to bring it to market.

Our mineral springs are unsurpassed for their medicinal qualities and healing powers. Of these we name the Paraiso and Tassajara. These springs will yet become the resort of invalids from all parts of the State seeking relief "from the many ills to which flesh is heir."

The Hotel Del Monte, at Monterey, for massiveness of structure, richness of architecture, beauty of grounds, and charming scenes, is unrivaled on the round world. The fame of this resort is known and visited by, tourists of all lands coming to our shores. It is a jewel in the bosom of our beautiful county.

What are our future prospects as a county? The exhibits before us speak of her potential wealth, and while much has been done to develop her resources, yet her soil possesses potential riches of which we scarcely dreamed. True, there are drawbacks to her progress, but the fact that much of her acreage is included in large grants, and that obstruction will give way to the logic of events, and these grants can be divided up into small farms and sold to those seeking homes in the midst. The day is not far distant when our fertile valley and hillsides will be largely planted in orchards and vineyards, whose fruits will bring a growing revenue to their fortunate owners, and plenty to ten thousand firesides.

We should not fail to speak of our public schools. It would have afforded us pleasure to have seen on exhibit samples of skill in painting and drawing. Our schools are an honor to the county, and with the best in the State. God bless the educators of our youth.

John G. Saxe was once present when little rocky Vermont was the meagerness of her material production, when the people of Vermont is content to build school houses and churches and men. Men are the choicest growth our realms supply."

For, after all, the true wealth of a State consists not in her riches in her fleets of commerce, nor in her armaments of war; not in silver and gold; not in her flocks of sheep and bands of cattle on the thousand hills; not in her granaries stored with the finest of wheat. The true wealth of a State is in her mind—educated minds built on the eternal granite of moral principle. We owe all our material progress to the intelligent mind. Let these resources be used for the benefit of our children, intellectually and morally for the uplifting of the race. Then shall more and more be developed the vast and varied resources of our county and State. Then may we not hope that here on the Pacific Slope, where rolls the Sacramento over sands of gold, before the mighty flood to the sea, with our healthful climate and her valleys as the Nile, with her majestic forests and grand mountains, we may grow up a mighty empire where civilization, education, science, religion may reach their high culminating point, and, standing the revolutions of time, pour their undimmed glories on the world.

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
THOROUGHBREDS—STALLIONS.			
Three years old and over	M. P. Kelly	Gonzales	\$10 00
Two years old	Chas. Cockerill	Soledad	\$2 50
One year old	J. D. Carr	Salinas City	\$4 00
MARES.			
Three years old and over	J. D. Carr	Salinas City	\$8 00
Two years old	M. P. Kelly	Gonzales	\$2 50
One year old	J. D. Carr	Salinas City	\$1 50
And four colts	J. D. Carr	Salinas City	\$10 00
ROADSTERS—STALLIONS.			
Three years old and over	Chas. Cockerill	Soledad	\$10 00
Two years old	J. D. Carr	Salinas City	\$8 00
One year old	Thos. Graves	Gonzales	\$2 50
MARES.			
Three years old and over	J. H. Harris	Salinas City	\$7 50
Two years old	P. Kilburn	Salinas City	\$5 00
One year old	H. Corey	Salinas City	\$5 00
FOR ALL PURPOSES—STALLIONS.			
Four years old and over	R. S. R. Clayton	Priest Valley	\$15 00
Three years old	P. M. Jacks	Salinas City	\$10 00
Two years old	E. C. Callihan	Salinas City	\$7 50
One year old	M. Lynn	Salinas City	\$10 00
MARES.			
Three years old and over, with colt	M. Lynn	Salinas City	\$10 00
DRAFT HORSES—STALLIONS.			
Four years old and over	John Drake	Gonzales	\$15 00
HEAVY DRAFT—STALLIONS.			
Three years old	James Thompson	Salinas City	\$3 00
Two years old	W. B. Ford	Salinas City	\$2 50
MARES.			
Three years old and over	W. B. Ford	Salinas City	\$7 50
Two years old	Thos. Garside	Salinas City	\$2 50
One year old	M. Lynn	Salinas City	\$1 50
CARRIAGE HORSES.			
And mate	S. Lean	Salinas City	\$5 00
SADDLE HORSE.			
	S. N. Mathews	Salinas City	\$2 50
SWEETSTAKES.			
Stallion, with four or more colts	J. D. Carr	Salinas City	\$20 00
Draft stallion, with four or more colts	M. Lynn	Salinas City	\$20 00
Stallion of any breed or age	H. Corey	Salinas City	\$15 00
Draft stallion of any breed or age	R. S. R. Clayton	Salinas City	\$7 50
Mare of any breed or age	J. D. Carr	Salinas City	\$15 00
Maid, mare of any breed or age	Wm. Vanderhurst	Salinas City	\$10 00
Colt of any breed	J. B. Iverson	Salinas City	\$10 00
Colt, suckling colt of any breed	J. D. Carr	Salinas City	\$5 00

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CATTLE—DURHAMS—BULLS.		
Parnell, three years old.....	M. Lynn.....	Salinas City.....
Mack, calf.....	J. C. Storm.....	Salinas City.....
COWS.		
Scotty, four years old and over.....	J. C. Storm.....	Salinas City.....
Flora 7th, four years old and over.....	M. Lynn.....	Salinas City.....
Flora 12th, three years old.....	M. Lynn.....	Salinas City.....
Lady Parnell, two years old.....	M. Lynn.....	Salinas City.....
Lady, one year old.....	M. Lynn.....	Salinas City.....
Buena Vista Maid, calf.....	M. Lynn.....	Salinas City.....
Buena Vista Lass, calf.....	M. Lynn.....	Salinas City.....
Best herd of cattle of any breed.....	M. Lynn.....	Salinas City.....
SWINE.		
Prince Bismarck.....	D. McKinnon.....	Salinas City.....

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Best windmill.....	J. C. Murphy	San José.....
Best walking plow.....	J. B. Carrington	San Francisco..
Best sulky harrow.....	J. B. Carrington	San Francisco..
Best gang plow.....	J. B. Carrington	San Francisco..
Best grain sower.....	J. B. Carrington	San Francisco..
Best exhibit of blacksmith work.....	E. Maguire	Salinas City...
Best exhibit of tanned leather.....	W. J. Black	Salinas City...
Best home-made woolen socks.....	Mrs. John Kaler	Salinas City...
Best home-made cotton socks.....	Mrs. John Kaler	Salinas City...
Best crochet quilt.....	Mrs. J. P. Raymond	Salinas City...
Best rag rug.....	Mrs. J. P. Raymond	Salinas City...
Best home-made woolen stockings.....	Mrs. J. Clausen	Salinas City...
Best plain silk embroidery.....	Mrs. Job Wood	Salinas City...
Best article in floselle.....	Miss Anna Zaballa	Salinas City...
Best article in arrasene.....	Mrs. J. B. Brazelton	Salinas City...
Best article in embroidered plush.....	Mrs. J. B. Brazelton	Salinas City...
Best tapestry embroidery.....	Mrs. E. Rossi	Salinas City...
Best outline embroidery.....	Miss C. Powell	Salinas City...
Best chenille embroidery.....	Mrs. J. T. Birlem	Salinas City...
Best raised silk work.....	Mrs. P. Zaballa	Salinas City...
Best article in ribbosene.....	Mrs. J. B. Brazelton	Salinas City...
Best embroidered table scarf.....	Mrs. Job Wood	Salinas City...
Best embroidered table scarf, two ends.....	Mrs. J. H. McDougall	Salinas City...
Best embroidered chair cover.....	Miss A. Zaballa	Salinas City...
Best embroidered lambrequin.....	Mrs. A. A. Witherill	Salinas City...
Best embroidered sofa pillow.....	Miss Mary Hughes	Salinas City...
Best wall panel or banner.....	Mrs. J. B. Brazelton	Salinas City...
Best ottoman or stool.....	Mrs. Job Wood	Salinas City...
Best braiding.....	Mrs. J. T. Birlem	Salinas City...
Best Spanish or drawn work.....	Mrs. P. Zaballa	Salinas City...
Best article in darned tulle.....	Mrs. J. P. Raymond	Salinas City...
Best silk patchwork bedquilt.....	Mrs. J. P. Raymond	Salinas City...
Best embroidered toilet set, three pieces.....	Mrs. J. P. Raymond	Salinas City...
Best cotton patchwork bedquilt.....	Mrs. Job Wood	Salinas City...
Best macrame work.....	Mrs. Job Wood	Salinas City...
Best child's or buggy afghan.....	Mrs. J. P. Raymond	Salinas City...
Best embroidered tidy.....	Mrs. A. A. Witherill	Salinas City...
Best crochet tidy.....	Mrs. J. Clausen	Salinas City...
Best plain hemstitching.....	Miss A. Zaballa	Salinas City...
Best crocheted scarf.....	Mrs. J. Clausen	Salinas City...
Best hand-knit underwear.....	Mrs. J. P. Raymond	Salinas City...
Best hand-knit skirts.....	Mrs. J. Clausen	Salinas City...
Best crochet hood.....	Mrs. R. Corey	Salinas City...
Best crochet lace.....	Mrs. M. Hughes	Salinas City...
Best modern point lace.....	Mrs. S. Lean	Salinas City...

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Unfinished shawl or cape	Mrs. W. H. Webb	Salinas City	\$1 50
Handkerchief or glove case	Mrs. S. Lean	Salinas City	\$1 00
Embroidered banner or panel	Mrs. J. P. Raymond	Salinas City	\$1 00
Blanketing on bolting cloth	Mrs. W. H. Webb	Salinas City	\$2 00
Washstand toilet set	Miss L. L. Schutze	Salinas City	\$2 00
Set of parlor furniture	Francee & Burkman	Salinas City	\$15 00
Set of chamber furniture	Francee & Burkman	Salinas City	\$7 50
Set of spring mattresses	Francee & Burkman	Salinas City	\$3 00
Set of spring beds	Francee & Burkman	Salinas City	\$3 00
Set of upholstery	Francee & Burkman	Salinas City	\$5 00
General display of furniture	Francee & Burkman	Salinas City	\$20 00
Display of jewelry	W. Smith	Salinas City	\$5 00
Set of native wines	M. Cartier	Salinas City	\$10 00
Section of garden products	M. Cartier	Salinas City	\$10 00
Set of potatoes	Chas. Bordin	Salinas City	\$2 00
Set of dried beans	W. Parsons	Salinas City	\$2 00
Set of corn	G. J. Bookenogen	Gonzales	\$1 00
Set of pumpkins	M. Cartier	Salinas City	\$1 00
Twenty pounds tomatoes	J. R. Hebronn	Salinas City	\$2 00
Large beets	Jas. Jeffery	Salinas City	\$3 00
Set of pumpkins	J. R. Hebronn	Salinas City	\$1 00
Set of pumpkins	Chas. Bordin	Salinas City	\$2 00
Set of potatoes	M. Cartier	Salinas City	\$1 00
Set of beans	Jas. Jeffery	Salinas City	\$1 00
General display of fruit	H. Blinn	Gonzales	\$1 00
Five varieties apples	G. J. Bookenogen	Gonzales	\$20 00
Set of fruit	R. N. Windsor	Gonzales	\$10 00
Set of varieties pears	M. Lynn	Salinas City	\$5 00
Set of varieties pears	R. N. Windsor	Gonzales	\$7 50
Set of fruit	Thomas Watson	Salinas City	\$3 50
Set of fruit	Thomas Watson	Salinas City	\$3 50
Set of fruit	R. N. Windsor	Gonzales	\$5 00
Set of fruit	G. J. Bookenogen	Gonzales	\$2 50
Set of fruit	Thomas Watson	Salinas City	\$7 50
Set of fruit	G. J. Bookenogen	Gonzales	\$3 50
Set of fruit	G. J. Bookenogen	Gonzales	\$3 50
Set of fruit	G. J. Bookenogen	Gonzales	\$5 00
Set of fruit	G. J. Bookenogen	Gonzales	\$5 00
Set of varieties canned fruit	Mrs. H. Blinn	Gonzales	\$5 00
Set of fruit	Mrs. J. B. Hickman	Gonzales	\$2 50
Set of varieties fruit sealed in glass	Mrs. R. Corey	Salinas City	\$10 00
Set of fruit	Mrs. W. L. Carpenter	Salinas City	\$5 00
Set of preserves	Mrs. H. Blinn	Gonzales	\$5 00
Set of fruit	Mrs. J. B. Hickman	Gonzales	\$2 50
Set of jellies	Mrs. J. B. Hickman	Gonzales	\$5 00
Set of fruit	Mrs. R. Corey	Salinas City	\$2 50
Set of dried fruit	Mrs. H. Blinn	Gonzales	\$5 00
Set of dried prunes and plums	Mrs. H. Blinn	Gonzales	\$5 00
Set of dried apples	Mrs. H. Blinn	Gonzales	\$2 00
Set of dried pears	Mrs. J. B. Hickman	Gonzales	\$2 00
Set of dried apricots	Mrs. J. B. Hickman	Gonzales	\$2 00
Set of dried peaches	Mrs. H. Blinn	Gonzales	\$2 00
Section of flowers in bloom	Mrs. S. F. Dixon	Salinas City	\$5 00
Section of foliage plants	Mrs. S. F. Dixon	Salinas City	\$5 00
Section of cut flowers	Mrs. S. F. Dixon	Salinas City	\$5 00
Section of new and rare plants	Mrs. S. F. Dixon	Salinas City	\$5 00
Section of dahlias	Mrs. J. B. Hickman	Gonzales	\$2 00
Section of roses in bloom	Mrs. S. F. Dixon	Salinas City	\$2 00
Section of pinks	Mrs. S. F. Dixon	Salinas City	\$1 00
Section of fuchsias	Mrs. S. F. Dixon	Salinas City	\$1 00
Section of ferns	Mrs. S. F. Dixon	Salinas City	\$1 00
Set of wheat	G. J. Bookenogen	Gonzales	\$3 00
Set of barley	J. J. Hebronn	Salinas City	\$2 00
Set of Chevalier barley	A. Foster	Salinas City	\$2 00
Set of oats	J. W. Patton	Salinas City	\$2 00
Set of corn	G. J. Bookenogen	Gonzales	\$2 00
Set of hops	Louis Zaballa	Salinas City	\$2 00
Set of corn	Thomas Watson	Salinas City	\$2 00
Set of honey in comb	C. Swensen	Salinas City	\$2 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best exhibit of strained honey	Mrs. J. B. Hickman	Gonzales
Best sign painting	Francee & Burkman	Salinas City
Best oil painting from nature	Miss L. L. Schultze	Salinas City
Best copy oil painting	Miss L. L. Schultze	Salinas City
Best original crayon drawing	Miss L. L. Schultze	Salinas City
Best copy crayon drawing	Miss L. L. Schultze	Salinas City
Best original pencil drawing	Miss L. L. Schultze	Salinas City
Best copy pencil drawing	Miss L. L. Schultze	Salinas City
Best oil painting in flowers	Miss L. L. Schultze	Salinas City
Best hand-painted china	Mrs. L. H. Garrigar	Salinas City
Best penmanship	Miss Mary Hughes	Salinas City
Best collection of minerals	Mrs. A. A. Witherill	Salinas City
Best display of shells	Miss A. Zaballa	Salinas City
Best display of flour	Central Milling Co.	Salinas City
Best exhibit of bread	Maud Kaler	Salinas City
Second best	Lida Parsons	Salinas City
Best butter	M. Breschini	Salinas City
Second best	J. D. Carr	Salinas City
Best cheese	A. Agostini	Salinas City
Second best	J. J. Hebborn	Salinas City
Best calico dress by miss under thirteen years	Emma J. Blinn	Salinas City
Best hand sewing, four or more pieces	Emma J. Blinn	Salinas City
Best painting in water colors	Teresa Hartnell	Salinas City
Best penmanship	Ellen Hughes	Salinas City

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 30, 1890.

RACE NO. 1—TROTTING.

Old Colt Stake for 1890. One hundred dollars added by the association. Mile heat two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wild, b. m., by Junio	Wm. Vanderhurst	Salinas City.
Wilkes, b. m., by Guy Wilkes	P. Kilburn	Salinas City.
W. a. a., by Junio	C. Z. Hebert	Salinas City.

SUMMARY.

Miss Maid	1	1
Andy Wilkes	3	2
W. a. a.	2	3

Time—2:52½; 2:52.

RACE NO. 2—RUNNING.

all horses in the district. Purse, one hundred and fifty dollars. Three-quarter mile heat, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
W. a. m., by Wildidle	P. Collins	Gonzales.
W. g., by Kingston	James Dwain	Salinas City.
W. a. a., by Wildidle	James Handley	Soledad.

SUMMARY.

W. g.	3	1
W. a. m.	1	dis.
W. a. a.	2	dis.

Time—1:21½; 1:20½.

RACE NO. 3—TROTTING.

all horses. Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
W. a. m., by Brown Jug	Robert I. Orr	Hollister.
W. a. a., by Carr's Mambrino	W. H. Wisecarver	Salinas City.
W. a. a., by Chrisman's Hambletonian	G. C. Owens	San José.

SUMMARY.

St. Patrick	1 1
Mary O	2 2
Marion	3 3

Time—2:34; 2:36½; 2:41.

WEDNESDAY, OCTOBER 1, 1890.

RACE No. 4—TROTTING.

3:00 Class. Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	
Gilpatrick, b. s., by Junio	James Dwain	1
Alfred G, b. g., by Mambrino, Jr.	J. B. Iverson	2
Starlight, g. m., by Jim Mulvenna	J. J. Nutting	3
Lucky Jim, blk. g.	A. G. Willson	4

SUMMARY.

Gilpatrick	1 2 2 1
Starlight	2 1 1 1
Lucky Jim	4 3 3 1
Alfred G.	3 4 4 6

Time—2:39; 2:45; 2:45; 2:45½; 2:42.

RACE No. 5—TROTTING.

For all one-year old colts in the district. Purse, one hundred and fifty dollars. Half mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	
Lucky Girl, b. m., by Carr's Mambrino	J. D. Carr	1
Bruno, b. s., by Junio	C. Z. Hebert	2
Katie B, b. m., by Sidney	H. P. Brown	3

SUMMARY.

Bruno	1
Lucky Girl	2
Katie B	3

Time—1:46; 1:33.

THURSDAY, OCTOBER 2, 1890.

RACE No. 6—RUNNING.

For named horses. Purse, one hundred and fifty dollars. One-half mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	
Hollister Dennis, b. g., by McKinstry	N. Vinagre	1
Roundout, b. s., by Kingston	M. P. Kelly	2
Lady R, b. m., by Wildidle	Eugene Breen	3
Johnny I, s. g., by Oliver Cromwell	O. Imus	4
Pirate, b. g., by Kingston	James Dwain	5

SUMMARY.

Lady R	1 1
Johnny I	2 2
Roundout	3 3

Time—0:51; 0:51.

RACE No. 7—TROTTING.

Purse, two hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mr. s. s., by Bismarck	R. F. Fox	San José.
Mr. g. s., by Jim Mulvenna	G. T. Johnson	San José.
Mr. m., by Carr's Mambrino	J. Cochran	Salinas City.

SUMMARY.

Mr. s. s.	1 1 1
Mr. g. s.	3 2 2
Mr. m.	2 3 3

Time—2:31½; 2:32; 2:29.

RACE No. 8—PACING.

For named horses. Purse, one hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mr. g.	S. N. Mathews	Salinas City.
Mr. of the Oaks, blk. s., by Sevenoaks	G. C. Owens	San José.
Mr. s. s., by Brown Jug	C. Rodriguez	Salinas City.

SUMMARY.

Mr. g.	1 1 1
Mr. of the Oaks	3 2 2
Mr. s. s.	2 3 3

Time—2:51½; 2:48; 2:44.

FRIDAY, OCTOBER 3, 1890.

RACE No. 9—TROTTING.

For three-year olds in the district. Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mr. m., by Jim Mulvenna	J. J. Nutting	Hollister.
Mr. s. s., by Junio	John Dougherty	Gonzales.
Mr. g., by Mambrino, Jr.	J. B. Iverson	Salinas City.

SUMMARY.

Mr. m.	2 1 1 1
Mr. s. s.	1 2 2 2
Mr. g.	3 3 3 3

Time—2:42; 2:46½; 2:42; 2:43.

RACE No. 10—PACING.

For named horses. Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
T B, s. g.	W. E. Peck	W. E. Peck
George Wapple, by Brigadier	C. Sherman	C. Sherman
San José	H. S. Cox	H. S. Cox

SUMMARY.

San José	1	1	2	2
George Wapple	2	2	1	1
T B	3	3	3	3

Time—2:34; 2:34½; 2:30; 2:31; 2:34; 2:30½.

RACE No. 11—TROTTING.

For named horses. Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
St. Patrick, b. s., by Carr's Mambrino	P. McCartney	P. McCartney
Billy Emerson, br. g.	H. G. Cox	H. G. Cox
Mary O, s. m., by Brown Jug	R. J. Orr	R. J. Orr
Marion, gr. g., by Chrisman's Hambletonian	G. C. Owens	G. C. Owens

SUMMARY.

Billy Emerson	4	1	1	1
Marion	1	4	1	1
St. Patrick	3	2	2	2
Mary O	2	3	4	4

Time—2:38½; 2:38½; 2:38; 2:34.

RACE No. 12—RUNNING.

For all two-year old colts in the district. Purse, one hundred and twenty dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rhinebeck, b. m., by Kingston	M. P. Kelly	M. P. Kelly
Jennie D, br. m., by Ironclad	J. Dwain	J. Dwain
Valledore, gr. g., by Billy Walker, Jr.	E. Breen	E. Breen

SUMMARY.

Valledore	1	1	1	1
Jennie D	3	2	2	2
Rhinebeck	2	3	4	4

Time—0:52½; 0:54½.

SATURDAY, OCTOBER 4, 1890.

RACE No. 13—TROTTING.

For named horses. Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Paul Grant, b. g., by Junio	Jas. Dwain	Salinas City.
Barrel Prince, b. g., by General Lee	R. S. R. Clayton	Priest Valley.
Emmett C, b. g.	A. C. Wood	Watsonville.
Prince, s. g., by General Lee	J. H. Harris	Salinas City.

SUMMARY.

Paul Grant	2	1	1	1
Barrel Prince	1	2	3	3
Emmett C	3	3	2	2

Time—2:48½; 2:49½; 2:49; 2:54½.

RACE No. 14—TROTTING.

For named horses. Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lee, by General Lee	Geo. W. Theuerkauf	Gonzales.
Lee, by Jim Mulvenna	G. C. Johnson	San José.

SUMMARY.

Lee	1	1	1	1
Burgent	2	2	2	2

Time—2:23½; 2:34½; 2:29.

RACE No. 15—TROTTING.

For all two-year olds in the district. Purse, one hundred and fifty dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lee, b. s., by Junio	C. Z. Hebert	Salinas City.
Lee, b. m., by Erwin Davis	C. C. Allen	Salinas City.
Wilkes, b. m., by Guy Wilkes	James Dwain	Salinas City.

SUMMARY.

Lee	1	1	1	1
Wilkes	3	2	2	2
Wilkes	2	3	4	4

Time—2:55; 2:57.

TRANSACTIONS

OF THE

EIGHTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of El Dorado.

REPORT.

OFFICERS OF THE ASSOCIATION.

G. J. CARPENTER.....
 THOMAS FRASER.....
 JAMES BLAIR.....

DIRECTORS.

G. J. CARPENTER.....
 FRANK MILLER.....
 JOHN P. ALLEN.....
 ROBERT McKAY.....
 SHELLY INCH.....
 ISAAC EDDY.....
 R. W. BAUM.....
 JOHN McF. PEARSON.....

honorable the State Board of Agriculture:

MEMEN: The Directors of the Eighth District Agricultural Association submit this, their report of the transactions of said association, for the year ending December 1, 1890.

THOMAS FRASER,
 Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

Cash in Treasurer's hands, 1889	\$3 98
Cash received for membership tickets	135 00
Cash for season and daily tickets	217 25
Cash for sale of woven plates	1 45
Net cash from ball tickets	46 30
Cash advanced by Alderson & Co. to pay premiums and expenses	2,000 00
Donations by citizens	374 11
	<u>\$2,778 09</u>

Expenditures.

Printing and advertising	\$34 50
Stationery, postage, and telegraphing	6 61
Band music for fair and ball	130 00
Secretary's and Superintendent's salaries	170 00
Rent of Pavilion and Park	125 00
Clerk hire at hall and track	31 00
Hay furnished	23 91
Labor, lumber, water, nails, oil, etc., at Pavilion and Park	151 87
Interest to Alderson & Co.	66 00
Premiums paid	2,039 20
	<u>\$2,778 09</u>

ANNUAL ADDRESS.

DELIVERED AT THE PAVILION, WEDNESDAY EVENING.

By HON. THOMAS FRASER.

MR. PRESIDENT, LADIES AND GENTLEMEN: I hardly understand why I should have been selected by the Board of Directors to deliver an annual address before this association. As you all know, I make no pretension as a public speaker. I can only account for the invitation from the fact that they offered no premium for an address, and no contributors in that department this year, and knowing I had been connected with the district fair, kindly invited me to tell what I knew about farming. Although my remarks may justly be considered somewhat mixed, I propose to make a few suggestions on the progress of the district, and how best to aid and assist in developing our resources.

With regard to our fair, ladies and gentlemen, this is the two hundred and first annual exhibit made within our county under the management of this organization. Who of you present here to-night witnessed the exhibit made at our first fair? If any, I should like to have them stand up here in the presence of this grand display which is before us, and we have not advanced and improved in all material industries of our county. Not being a pioneer myself, I yet came into the county with enough to retail peaches at \$4 50 a dozen, that would not weigh as much as a single one upon your tables to-night.

I think that the exhibit this year of fruits, cereals, vegetables, etc., together with the exhibit of live stock, will furnish an answer to the question so often asked, is El Dorado a farming county? In making this display, our people have not done their best—that is, if any of them, yes, too many, have not contributed anything towards it, even by their presence. By attending our annual fairs and exhibits of the products of the farm, garden, mine, and wood, they would promote their own prosperity and aid in the development of our great resources; our farming, horticultural, lumbering, and other interests would be better understood, and each would have a community of interest with the other.

By attending these annual fairs our farmers and mechanics are enabled to become acquainted with each other, and an opportunity is thus afforded them to ascertain and personally examine and improve different improvements going on in the various industries of the county.

These annual gatherings and exhibits stimulate competition, improve the stock, introduce a better system of cultivating the soil, encourage the farmer, elevate the farmer, and dignify labor.

It has been said by that wise and distinguished statesman, George Washington, "that the only honest way for a nation to acquire wealth is by agriculture, whereby a man receives the increase of the seed thrown upon the ground—a kind of continued miracle, wrought by the hand of God in his favor as a reward for his innocent life and his virtuous industry with nations, so with individuals. We believe the farmer is the

wealth-producing agent of our country, and in communities where the farmer is dependent upon the farmer, all others feel the failure of the crops as much as he does, for if the farmer receives but little reward for his labor, the merchant, the butcher, and the baker—all branches—feel the loss as well as the farmer. But with good returns from the farmer and orchard comes general prosperity in all branches of trade, industry, and commerce.

But I want to say something about our resources, the progress we have made, and our chances for future development. Who can foresee the possibilities of our county, containing nearly two million acres of land supporting to-day, according to the census just taken, less than one hundred thousand people. Situated as we are here, less than sixty miles from the capital city of the State, with a railroad to our doors, with a supply second to no other foothill section in the State, our mountains covered with virgin pine, our mines of untold wealth, our slate, our soapstone, lime, paint, and iron mines, with an acknowledged position in every State of the Union for producing the finest fruits of every kind which is raised in any portion of the State; our mountain lakes, mineral springs, and crystal streams of pure mountain water; a climate unexcelled; cheap lands—in fact, all natural advantages to build up and make one of the grandest communities in the great State. Who, I say, can foretell the future of our county?

As regards the development of all the elements of wealth, we are to-day but little in advance of where we were a quarter of a century ago. We must awaken from our lethargy, our people must fall into the path of improvements and take lessons from the public-spirited of other sections. And in this connection allow me to offer a few suggestions which present themselves as to how we can benefit ourselves, our farmers and producers, and at the same time improve our county by assisting in developing our varied resources. Instead of folding our arms and following in the old ruts, or waiting for some one to come along and help us out, if we would succeed as a fruit-growing county, we must give our trees more attention by a thorough annual pruning, by using lime-sulfur to stamp out and eradicate the codlin moth and all other fruit pests which have been so destructive of late years to our orchards. We must cultivate more and dispense with any and all other lands devoted to the orchards. We must give more attention to the drying and curing of our fruits for the market, if we expect to be able to get our labor. We must use more water, for I believe while it has been demonstrated that good fruit can be produced in many places in our county without water, a more liberal use of water is necessary, in some places, to produce the finest fruit; and to command good prices, we must have the best fruit.

In this connection allow me to say, that as citizens, farmers, and horticulturists, we should, to the utmost of our power, assist and encourage the extension and use of water over a larger area of our county. As a consequence of the absence of water, look, if you will, upon the fairest portion of the county, lying west of Shingle Springs—nearly one-half of the arable land in the county—with climate unsurpassed, with a railroad running through it, lying in its natural state, unused, and grazing a few months in the year, adding comparatively little to the assessment roll or benefit to the owner, while lands separately owned by an imaginary line in our sister county of Placer, which is one of the principal fruit-producing sections of this great State, with

water, is worth to-day from \$50 to \$300 per acre. A little effort on the part of the people in that section of the county would, in my opinion, be the means of extending the water supply all over the district. The result of which, in a few years, would add millions to our taxable property in that section of the county. With an assurance that our ditches would be extended, with the experiments made, the citrus can be produced to perfection. With water supply, no part of the county offers better inducements to the farmers and horticulturists than White Oak, Salmon Falls, and Mud Springs townships. Plant the best varieties, and none but the very best. Don't give a poor tree the orchard. Clean up the door and barn yards, whitewash the buildings, destroy the weeds from the fence corners, plow deep, tidy your surroundings, improve your dwellings and homes by planting and caring for flowers and shrubbery. In this connection, our Supervisors are to be commended in adopting measures to stop the ravages of the fruit pests, which bid fair at an early day to render the cultivation of fruit in our county impossible. By each making an improvement, your neighbor will do the same, and all will add to general prosperity.

A canning and drying establishment in some central portion of the county, in close proximity to the railroad, is an enterprise which is greatly needed, and one which would enable a great many of our growers to dispose of their fruit at remunerative prices. It would also encourage the raising of many new varieties of fruits, berries, and vegetables. Being one of the oldest fruit-producing sections of this State, and our orchards being planted without reference to the eastern market, it is to be hoped public enterprise will speedily supply a market for our fruits not suitable for shipment can be disposed of; and with fruit packing houses at convenient points along the line of railroad, where fruit would be bought, as in other sections; with annual competition in freight by the transportation companies from \$900 a car but a few years ago to less than \$300, with the unlimited demand, with many cars making it possible to ship our fruits in good order to all parts of the East, and the adoption of the auction plan in the disposal of the fruit upon arrival, without the aid of the middle man or commission man, it seems to me the future of old El Dorado for the fruit grower is brightening.

Our almost unlimited supply of sugar pine timber has attracted the attention of the speculator. Is it possible, my friends, that we who have resided here so long have set idly by and seen the timber made by others and not profited thereby? If the many lumber companies so recently engaged in in different places in our county have made to pay, with our thousands of acres of virgin pine and our lands even yet unclaimed, El Dorado is certainly on the verge of a prosperous future.

With the extension of the railroad to the county seat, our quarries have been brought to notice, and promise to be an important addition to our resources.

Renewed interest is being taken in our quartz and gravel, and it is promising in the near future to reinstate our county as one of the leading mining counties in the State.

It is to be hoped that the State and General Governments will adopt measures whereby property in our mines will be more secure, and that great industry receive its merited recognition as a legitimate

that farming and mining may both be prosecuted to the mutual benefit of each and the injury of neither.

Our county wants is a greater diversity of industries. El Dorado farmers, like those of too many other places, depend too much on the merchant for their supplies. Farmers, we are to-day importing our bacon, cheese, lard, eggs, poultry, apples, potatoes, and many other supplies from the East. This is all wrong. With proper management many of these articles can be raised right here at home, and at a profit to the producer. According to the report of the State Agricultural Survey for last year, of poultry and eggs in this State, the Secretary says there is a great lack of interest in this important industry, and asks if it is a surprise that such a state of affairs exists; that it is a sad reflection upon the productive qualities of our State, and sadder upon the energy of our people, that we are compelled, through lack of interest, and this is the whole cause—to import annually over one hundred fifty carloads of poultry, aggregating over three million pounds, which means a loss to our producers, at 15 cents a pound, of \$450,000 annually; that there had been imported into California during last year nearly \$3,000,000 worth of eggs. If the poultry raisers of the United States can raise poultry and eggs, pay the freight from there to San Francisco, and undersell us in this market, there must be a mistake in the business which we should be endeavoring to discover.

The importation of potatoes to our county should be superseded by those grown here. It is a fact that El Dorado County potatoes are superior to those brought from the valleys, and that there are thousands of acres of land lying east and north of Placerville which will produce the best kind of potatoes; and that they can be raised at a profit to the producer, no one disputes. So with apples. Then why not at least grow enough for our own use?

A few words about our fair. The representatives of the people, in the Legislature, recognizing the importance of agricultural, horticultural, and viticultural pursuits as the leading industries of our county, have annually appropriated large sums from the State Treasury for the support and encouragement of the State and district fairs. At the last session of our State Legislature over a quarter of a million of dollars was so appropriated. Have our annual exhibitions given satisfaction to the people, and do you think they should be continued and encouraged? Heretofore we have had a speed programme, which this year has been dispensed with, that feature of the fair not being patronized to the satisfaction of the management. After continuing the races for nothing over ten years, and having failed in that time to produce a single racehorse in the county, the Directors were unanimous in their opinion that the people did not want them, and have endeavored to make this simply an exhibition of stock, horticultural, agricultural, and mechanical industries of the district. Whether the future of the fair will depend on the demoralizing influences of the horse races or not, time will determine. I believe, myself, that the time is not far distant when horse racing will not only be discontinued at our fairs, but prohibited as a legitimate feature thereof. Fairs are just what the people make them. It does seem that when the importance of our fairs are recognized to the extent that they are by the State at large, and in El Dorado, so favored with all the elements of wealth, should that the fair will not only remain as a permanent exhibition,

but that it should meet with the encouragement it deserves from our own people.

There are many ways of advancing our county, and none more in my judgment, than by a liberal system of advertising. There are many ways to do it; the holding of this fair, the making of the exhibit which is before us, is a good advertisement. All visitors who have been here, when they return home or travel elsewhere, will tell his neighbors what he saw, and thus our county will be advertised. But a better way would be, and I call especial attention to the fact that the State Board of Trade, of which our county is a member, and to the support of which as taxpayers we are paying \$15 a month, as a part of its work has sent to the East what is called "California on Wheels," which is one of the cars fitted up for the purpose of exhibiting the fruits, grain, wine and other California productions, which display is taken from one city to the other and exhibited free in all the cities and towns. By this means the products of our county can be shown to thousands who might not have known there was such a county as El Dorado. The Board of Trade, its agent, also distributes all printed matter furnished him, and a list of each county represented. Now, with a small exhibit, made for our district fair, sent to the rooms of the State Board, and a similar exhibit to be forwarded to "California on Wheels," we would reach the eyes of people anxious to come and settle in our State. In this way we can advertise and exhibit our resources, and be the means of showing the home-seeker what inducements are offered him in El Dorado. This requires only a little effort on our part—the giving of the article, and us say to ourselves we will maintain such an exhibit, and it will be in great benefit to the county.

I recollect of reading, but a short time ago, a letter from a farmer of the county, in one of our newspapers, asking why we do not maintain such an exhibit, and how disappointed he was in not seeing anything from El Dorado County in the exhibit on wheels. It is all means advertise our section, and assist in directing the attention of the home-seeker to settle in our midst.

In conclusion, ladies and gentlemen, let us awaken from the lethargy of the past, and work together for the mutual interest of all means do not oppose those who are trying to induce men to invest in the legitimate industries of our county. Do not obstruct your neighbor's property. What we need here is capital to develop the avenues of wealth, and if you cannot succeed in disposing of your property, do not throw obstruction in your neighbor's way by doing him or his enterprise. There should be a community of interest between each other if we would succeed. Prosperity with one will have beneficial effects upon others—thus we are all benefited.

The ladies of the district are deserving of great credit for the always exhibited by them in the district fair, for the splendid display of fancy work, paintings, fine arts, etc., shown by them, and their presence and assistance always cheerfully given. The Board of Directors should see that their services are properly appreciated, and the award of liberal premiums.

I would be derelict in my duty if I did not congratulate the members of this association in having a Board of Directors composed of honorable men. Remember, they are serving you and giving you much valuable time without fee or hope of reward. They are deserving the thanks of every member and a verdict of "well done."

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
HORSES.			
Stallion, four years old	C. Forni	El Dorado	\$16 00
Stallion, three years old	John Smith	Diamond Spr'gs	\$8 00
Stallion, three years old	Thos. H. Clifton	Placerville	\$6 00
Stallion, two years old	John Askew	El Dorado	\$6 00
CATTLE.			
Stallion, three years old	Thos. Fraser	Placerville	\$12 00
Stallion, three years old	Thos. Fraser	Placerville	\$12 00
Stallion, two years old	Thos. Fraser	Placerville	\$8 00
Stallion, one year old	Geo. B. Bailey	Placerville	\$4 00
Stallion, three years old	Stephen Weymouth	Placerville	\$15 00
Stallion, two years old	John Askew	El Dorado	\$8 00
Stallion, two years old	John Askew	El Dorado	\$10 00
Stallion, one year old	John Askew	El Dorado	\$2 00
Stallion, one year old	P. J. Isbell	Placerville	\$2 50
Jersey cattle	John Askew	El Dorado	\$12 00
Stallion, two years old	Geo. W. Askew	El Dorado	\$4 00
Stallion, one year old	Geo. W. Askew	El Dorado	\$4 00
Stallion, one year old	Geo. W. Askew	El Dorado	\$2 00
Stallion, two years old	John Askew	El Dorado	\$5 00
Stallion, three years old	M. O. Keefe	Placerville	\$7 50
SWINE.			
Sow, two years old and over	J. D. Bennett	Shingle Springs	\$6 00
Sow, under one year	John Askew	El Dorado	\$3 20
Sow, under one year	John Askew	El Dorado	\$3 20
Sow, eight months old	Geo. B. Bailey	Placerville	\$3 20
Boar, two years old	Thos. Fraser	Placerville	\$6 00
Boar and family	Thos. Fraser	Placerville	\$7 50
Boar, one year old	John D. Bennett	Shingle Springs	\$5 00
POULTRY.			
Barred Plymouth Rocks	T. H. Clifton	Placerville	\$1 60
White Plymouth Rocks	T. H. Clifton	Placerville	\$1 60
White Leghorns	T. H. Clifton	Placerville	\$1 60
Langshans	T. H. Clifton	Placerville	\$1 60
Black Spanish	T. H. Clifton	Placerville	\$1 60
Black Wing Bantams	T. H. Clifton	Placerville	\$1 60
Black Games	T. H. Clifton	Placerville	\$1 60
White Wyandottes	T. H. Clifton	Placerville	\$1 60
White Lace	T. H. Clifton	Placerville	\$1 60
Green geese	T. H. Clifton	Placerville	\$1 60
Crested ducks	T. H. Clifton	Placerville	\$1 60
Poultry	T. H. Clifton	Placerville	\$4 00
Brown Leghorns	Geo. W. Askew	El Dorado	\$2 00
Black Leghorns	John Askew	El Dorado	\$1 60
House geese	Thos. Fraser	Placerville	\$1 60

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Hurdy water wheel.....	Green & Price.....	Placerville.....
Steam engine (model).....	C. J. Green.....	Placerville.....

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Best tanned deer skins.....	Louis Reiber.....	Placerville.....
Best exhibit of soft soap.....	Mrs. M. Hendrix.....	Placerville.....
Best exhibit of roofing slate.....	Geo. J. Mothersole.....	Placerville.....
Best general display of groceries.....	Hardie & Schiff.....	Placerville.....

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Best twenty-five pounds wheat.....	F. M. McCuen.....	White Rock.....
Second best.....	John Askew.....	El Dorado.....
Best ten pounds hemp.....	Louis Reiber.....	Six-mile House.....
Best bale hops.....	W. W. Hoyt.....	Diamond Spr'gs.....
Best twenty-five pounds oats.....	F. M. McCuen.....	White Rock.....
Best ten pounds flax.....	F. M. McCuen.....	White Rock.....
Best twenty-five pounds buckwheat.....	Thos. Fraser.....	Placerville.....
Best amber cane and exhibit of amber syrup.....	John Blackison.....	White Rock.....
CLASS II.		
Best display of potatoes.....	John Askew.....	El Dorado.....
Best twenty pounds onions.....	Kramp & Co.....	Diamond Spr'gs.....
Best exhibit of squash.....	S. R. Tripp.....	Placerville.....
Best exhibit of cucumbers.....	S. R. Tripp.....	Placerville.....
Best exhibit of table beets.....	S. R. Tripp.....	Placerville.....
Best three muskmelons.....	S. R. Tripp.....	Placerville.....
Best exhibit of watermelons.....	S. R. Tripp.....	Placerville.....
Second largest watermelon.....	S. R. Tripp.....	Placerville.....
Best exhibit of sweet corn on stalk.....	S. R. Tripp.....	Placerville.....
Best exhibit of Indian corn on stalk.....	S. R. Tripp.....	Placerville.....
Second best exhibit of potatoes.....	John P. Allen.....	Placerville.....
Best exhibit of tomatoes.....	John P. Allen.....	Placerville.....
Best exhibit of cabbages.....	John P. Allen.....	Placerville.....
Best exhibit of parsnips.....	John P. Allen.....	Placerville.....
Largest watermelon.....	John P. Allen.....	Placerville.....
Largest squash.....	John P. Allen.....	Placerville.....
Second largest.....	John P. Allen.....	Placerville.....
Largest cabbage.....	John P. Allen.....	Placerville.....
Best exhibit of potatoes.....	Geo. W. Van Vleck.....	Placerville.....
Best exhibit of popcorn.....	Geo. W. Van Vleck.....	Placerville.....
Second best exhibit of parsnips.....	Geo. W. Van Vleck.....	Placerville.....
Best exhibit of table carrots.....	Geo. W. Van Vleck.....	Placerville.....
Best exhibit of stock carrots.....	Geo. W. Van Vleck.....	Placerville.....
Best exhibit of table beets.....	Geo. W. Van Vleck.....	Placerville.....
Best exhibit of stock beets.....	Geo. W. Van Vleck.....	Placerville.....
Best exhibit of cucumbers.....	I. S. Bamber.....	Placerville.....
Second best display of tomatoes.....	J. C. Marsh.....	Placerville.....
Second best exhibit of table carrots.....	J. C. Marsh.....	Placerville.....
Best exhibit of green peppers.....	J. C. Marsh.....	Placerville.....
Second best.....	Peter Wilkinson.....	Placerville.....
Best exhibit of onions.....	Peter Wilkinson.....	Placerville.....
Second best three muskmelons.....	Peter Wilkinson.....	Placerville.....

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Exhibit of squash.....	Peter Wilkinson.....	Placerville.....	\$1 50
Exhibit of cabbage.....	Peter Wilkinson.....	Placerville.....	\$1 50
Best exhibit of sweet corn on.....	W. W. Hoyt.....	Diamond Spr'gs.....	\$2 00
Best exhibit of stock beets.....	Mrs. P. Kramp.....	Diamond Spr'gs.....	\$1 00
CLASS III.			
Collection of flowering plants in.....	Mrs. W. H. H. Fellows.....	Placerville.....	\$6 00
Display of cut flowers.....	Mrs. W. H. H. Fellows.....	Placerville.....	\$2 00
Arrangement of cut flowers.....	Mrs. W. H. H. Fellows.....	Placerville.....	\$2 00
Display of ferns.....	Mrs. W. H. H. Fellows.....	Placerville.....	\$1 60
Display of ornamental grasses.....	Mrs. W. H. H. Fellows.....	Placerville.....	\$1 60
Ornamental floral piece or design.....	Mrs. W. H. H. Fellows.....	Placerville.....	\$2 40
Collection of flowering plants in.....	Mrs. E. N. Waters.....	Placerville.....	\$4 00
Collection of ornamental foliage.....	Mrs. E. N. Waters.....	Placerville.....	\$6 00
Collection of hanging baskets of.....	Mrs. E. N. Waters.....	Placerville.....	\$2 00
Living plants.....	Mrs. E. N. Waters.....	Placerville.....	\$2 00
Arrangement of cut flowers.....	Mrs. E. N. Waters.....	Placerville.....	\$2 00
CLASS IV.			
Four pounds butter, in rolls.....	P. J. Isbell.....	Placerville.....	\$5 00
Best six pounds butter, in rolls.....	G. W. Askew.....	El Dorado.....	\$2 50
Twenty pounds firkin butter, five.....	John Askew.....	El Dorado.....	\$4 00
Old.....	Mrs. M. Hendrix.....	Placerville.....	\$2 50
Best ten pounds lard.....	S. R. Tripp.....	Placerville.....	\$1 50
CLASS V.			
Best bread.....	Mrs. G. W. Askew.....	El Dorado.....	\$3 00
Best.....	Mrs. M. Hendrix.....	Placerville.....	\$2 00
Best bread.....	Mrs. P. Kramp.....	Diamond Spr'gs.....	\$1 60
Best bread.....	Mrs. P. Kramp.....	Diamond Spr'gs.....	\$1 60
Best bread.....	Mrs. P. Kramp.....	Diamond Spr'gs.....	\$2 00
Best bread.....	Mrs. P. Kramp.....	Diamond Spr'gs.....	\$1 60
Best largest variety of domestic.....	Mrs. P. Kramp.....	Diamond Spr'gs.....	\$4 00
Best rising bread.....	Mrs. M. Hendrix.....	Placerville.....	\$1 60
Exhibit of raised biscuits.....	Mrs. M. Hendrix.....	Placerville.....	\$2 00

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Best apples.....	I. S. Bamber.....	Placerville.....	\$7 50
Best peaches.....	I. S. Bamber.....	Placerville.....	\$7 50
Best pears.....	I. S. Bamber.....	Placerville.....	\$4 50
Best plums.....	I. S. Bamber.....	Placerville.....	\$4 50
Best prunes.....	I. S. Bamber.....	Placerville.....	\$4 50
Best nectarines.....	I. S. Bamber.....	Placerville.....	\$5 00
Best table grapes.....	I. S. Bamber.....	Placerville.....	\$5 00
Best apples.....	Thomas Fraser.....	Placerville.....	\$6 00
Best pears.....	Thomas Fraser.....	Placerville.....	\$7 50
Best apples.....	Wm. Hendrix.....	Placerville.....	\$4 50
Best peaches.....	Wm. Hendrix.....	Placerville.....	\$4 50
Best plums.....	Wm. Hendrix.....	Placerville.....	\$6 00
Best nectarines.....	Wm. Hendrix.....	Placerville.....	\$2 50
Best figs.....	Wm. Hendrix.....	Placerville.....	\$3 50
Best apples.....	T. O. Hardie.....	Placerville.....	\$3 00
Best peaches.....	T. O. Hardie.....	Placerville.....	\$6 00
Best table grapes.....	T. O. Hardie.....	Placerville.....	\$7 50
Best display of grapes.....	T. O. Hardie.....	Placerville.....	\$8 00
Best peaches.....	Kramp & Co.....	Diamond Spr'gs.....	\$3 00
Best wine grapes.....	Kramp & Co.....	Diamond Spr'gs.....	\$7 50

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Exhibit of pears.....	S. R. Tripp.....	Placerville
Exhibit of plums.....	S. R. Tripp.....	Placerville
Exhibit of prunes.....	S. R. Tripp.....	Placerville
Exhibit of pears.....	W. McCuen.....	White Rock
Exhibit of plums.....	W. McCuen.....	White Rock
Exhibit of strawberries.....	Mrs. E. N. Waters.....	Placerville
Exhibit of blackberries.....	Mrs. W. H. H. Fellows.....	Placerville
Exhibit of prunes.....	Peter Wilkinson.....	Placerville
Exhibit of figs.....	Ira S. Bamber.....	Placerville
CLASS II.		
Ten pounds dried apples.....	Wm. McCuen.....	White Rock
Ten pounds dried peaches.....	Wm. McCuen.....	White Rock
Ten pounds dried plums.....	Wm. McCuen.....	White Rock
Largest and best display of dried fruit by any process.....	Wm. McCuen.....	White Rock
Ten pounds dried apples.....	Louis Reiber.....	Six-mile House
Ten pounds dried pears.....	Louis Reiber.....	Six-mile House
Ten pounds dried peaches.....	Louis Reiber.....	Six-mile House
Ten pounds dried nectarines.....	Louis Reiber.....	Six-mile House
Ten pounds dried prunes.....	Louis Reiber.....	Six-mile House
Ten pounds dried pears.....	I. S. Bamber.....	Placerville
Ten pounds dried plums.....	I. S. Bamber.....	Placerville
Ten pounds dried nectarines.....	I. S. Bamber.....	Placerville
Ten pounds dried prunes.....	I. S. Bamber.....	Placerville
Ten pounds dried figs.....	I. S. Bamber.....	Placerville
Display of raisins.....	Thos. O. Hardie.....	Placerville
Display of raisins.....	Thos. O. Hardie.....	Placerville
Display of seedless raisins.....	Thos. O. Hardie.....	Placerville
Exhibit of English walnuts.....	Wm. Hendrix.....	Placerville
Exhibit of black walnuts.....	Wm. Hendrix.....	Placerville
Exhibit of soft-shell almonds.....	Kramp & Co.....	Diamond Spr
Exhibit of American chestnuts.....	Mrs. M. Hendrix.....	Placerville
Exhibit of Spanish or Italian chestnuts.....	Mrs. M. Hendrix.....	Placerville
CLASS III.		
Ten pounds honey in comb.....	Stephen Weymouth.....	Placerville
Ten varieties fruit in jars.....	Mrs. J. C. Marsh.....	Placerville
Jellies in glass.....	Mrs. J. C. Marsh.....	Placerville
Jams in glass.....	Mrs. J. C. Marsh.....	Placerville
Ten varieties fruit in glass.....	Mrs. I. S. Bamber.....	Placerville
Ten varieties preserves in glass.....	Miss Louisa Campini.....	Placerville
Exhibit of jams in glass.....	Miss L. E. Campini.....	Placerville
Exhibit of pickles in glass.....	Miss L. E. Campini.....	Placerville
Best and largest display of fruits in glass.....	Miss L. E. Campini.....	Placerville
Exhibit of preserves in glass.....	Mrs. E. N. Waters.....	Placerville
Exhibit of jellies in glass.....	Lewis Bros.....	Placerville
CLASS IV.		
Exhibit of grape brandy over one year old.....	Kramp & Co.....	Diamond Spr
Exhibit of peach brandy over one year old.....	Kramp & Co.....	Diamond Spr
Exhibit of dry white wine.....	Kramp & Co.....	Diamond Spr
Exhibit of sweet white wine.....	Kramp & Co.....	Diamond Spr
Exhibit of claret wine.....	Kramp & Co.....	Diamond Spr
Exhibit of port wine.....	Kramp & Co.....	Diamond Spr
Exhibit of sherry wine.....	Kramp & Co.....	Diamond Spr
Exhibit of champagne wine.....	Kramp & Co.....	Diamond Spr
Exhibit of apple cider.....	Kramp & Co.....	Diamond Spr
Best display of wines and brandies.....	Kramp & Co.....	Diamond Spr

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Exhibit of knit bedspread.....	Mrs. M. Ryan.....	Placerville	\$2 40
Exhibit of point lace handkerchief.....	Mrs. E. C. Hoover.....	Placerville	\$2 50
Exhibit of ribbon work.....	Mrs. E. C. Hoover.....	Placerville	\$2 50
Exhibit of lamp mat.....	Mrs. E. C. Hoover.....	Placerville	\$1 50
Exhibit of door mat of rags.....	Mrs. J. L. Small.....	Placerville	\$2 00
Exhibit of patchwork quilt.....	Mrs. J. L. Small.....	Placerville	\$2 00
Exhibit of crazy quilt.....	Mrs. J. L. Small.....	Placerville	\$3 20
Exhibit of sofa cushion.....	Mrs. J. L. Small.....	Placerville	\$2 00
Exhibit of canvas work.....	Mrs. J. L. Small.....	Placerville	\$2 40
Exhibit of pin cushion.....	Mrs. J. L. Small.....	Placerville	\$1 20
Exhibit of table cover.....	Mrs. J. L. Small.....	Placerville	\$2 80
Exhibit of table scarf.....	Mrs. J. L. Small.....	Placerville	\$2 80
Exhibit of lambrequin.....	Mrs. J. L. Small.....	Placerville	\$2 00
Exhibit of handkerchief box.....	Mrs. J. L. Small.....	Placerville	\$1 60
Exhibit of ladies' underwear.....	Mrs. J. L. Small.....	Placerville	\$3 20
Exhibit of fancy work.....	Mrs. J. L. Small.....	Placerville	\$6 00
Exhibit of embroidered handkerchief.....	Miss Lottie Wulff.....	Green Valley	\$1 20
Exhibit of paper flowers.....	Miss Lottie Wulff.....	Green Valley	\$1 60
Exhibit of cotton embroidery.....	Mrs. M. A. Murphy.....	Placerville	\$2 40
Exhibit of applique work.....	Mrs. M. A. Murphy.....	Placerville	\$2 00
Exhibit of crazy quilt.....	Miss Alice Rohlfing.....	Smith's Flat	\$2 50
Exhibit of silk embroidery.....	Miss Mattie Williams.....	Placerville	\$2 00
Exhibit of worsted embroidery.....	Miss Mattie Williams.....	Placerville	\$2 00
Exhibit of ottoman cover.....	Mrs. J. O'Donnell.....	Placerville	\$1 60
Exhibit of hearth rug.....	Mrs. J. O'Donnell.....	Placerville	\$2 50
Exhibit of knit undervest.....	Mrs. J. O'Donnell.....	Placerville	\$1 20
Exhibit of fire screen.....	Miss M. Carpenter.....	Placerville	\$2 80
Exhibit of tidy.....	Miss M. Carpenter.....	Placerville	\$1 50
Exhibit of carriage afghan.....	Miss M. Carpenter.....	Placerville	\$3 00
Exhibit of crochet shawl.....	Miss M. Carpenter.....	Placerville	\$3 50
Exhibit of piano cover.....	Miss M. Carpenter.....	Placerville	\$2 40
Exhibit of chenille work.....	Mrs. P. Carpenter.....	Placerville	\$2 00
Exhibit of baby afghan.....	Mrs. P. Carpenter.....	Placerville	\$2 50
Exhibit of toilet set.....	Mrs. P. Carpenter.....	Placerville	\$3 50
Exhibit of pillow shams.....	Mrs. J. A. Sigwart.....	Placerville	\$3 00
Exhibit of crochet bedspread.....	Mrs. J. A. Sigwart.....	Placerville	\$3 50
Exhibit of outline embroidery.....	Miss L. E. Campini.....	Placerville	\$2 00
CLASS II—JUVENILE.			
Exhibit of cotton quilt.....	Miss Ida L. Small.....	Placerville	\$2 00
Exhibit of crochet work.....	Miss Clara Miller.....	Placerville	\$2 50

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Exhibit of oil painting—cow's head.....	Miss L. Weatherwax.....	Placerville	\$4 80
Exhibit of oil painting—falls, Big.....	Miss L. Weatherwax.....	Placerville	\$3 20
Exhibit of oil painting.....	Miss L. Weatherwax.....	Placerville	\$2 40
Exhibit of oil paintings.....	Miss L. Weatherwax.....	Placerville	\$6 00
CLASS II.			
Exhibit of pastel.....	Miss L. Weatherwax.....	Placerville	\$3 20
Exhibit of crayon drawing—Fisher.....	Miss L. Weatherwax.....	Placerville	\$2 00
Exhibit of India ink drawings.....	Miss L. Weatherwax.....	Placerville	\$2 00
CLASS III.			
Exhibit of original oil paintings.....	Miss L. Weatherwax.....	Placerville	\$4 00
Exhibit of oil painting (copy).....	Miss L. Weatherwax.....	Placerville	\$2 40
Exhibit of oil painting—Bird on Nest.....	Miss L. Weatherwax.....	Placerville	\$2 00
Exhibit of paintings.....	Miss L. Weatherwax.....	Placerville	\$4 00

SEVENTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS IV.		
Exhibit of landscape drawing in crayon (copy)	Miss Belle S. Murphy (eleven years)	Placerville

SPECIAL PREMIUMS.

Exhibit.	Exhibitor.	Address.
Fruit trees, new varieties	W. W. Hoyt	Diamond Sprgs
Crystals quartz cabinet	Jno. Blackinson	White Rock
Cabinet specimens	Jno. McF. Pearson	Placerville
Four varieties domestic bread	Mrs. M. E. Lewis	Placerville
Display of fancy work	Miss Ida L. Small	Placerville
Display of fancy work	Miss L. Wulff	Green Valley
Exhibit of cotton embroidery	Miss B. Murphy (11 years old)	Placerville
Exhibit of lace and crochet work	Miss Nellie Bosworth	Placerville
Exhibit of fancy work	Mrs. Fred. Engesser	Green Valley
Exhibit of fancy work	Mrs. W. H. H. Fellows	Placerville
Exhibit of easels	Richard Waters	Placerville
Exhibit of fruit	H. L. Dingman	Placerville
Exhibit of hominy corn	D. Clark	Placerville
Exhibit of cling peaches	A. B. McCoy	Diamond Sprgs
Exhibit of sail boats and ships	Wm. Getchell	Placerville
Exhibit of cherries	S. W. Webster	Grizzly Flat
Exhibit of Egyptian wheat	T. Fraser	Placerville
Exhibit of Japan plums, prunes, etc.	P. Wilkinson	Placerville
Exhibit of thoroughbred fowls	Thos. H. Clifton	Placerville
Exhibit of eighty-four pieces fancy work	Mrs. J. S. Small	Placerville
Thirty-one varieties wine grapes	Kramp & Co.	Diamond Sprgs
Twenty-two varieties wine grapes	R. McKay	Coloma
Fourteen varieties table grapes	T. O. Hardie	Placerville
Exhibit of table grapes	I. S. Bamber	Placerville
Largest and best exhibit of fruit and grapes raised without irrigation	Thos. O. Hardie	Placerville
Second best	T. Fraser	Placerville
Exhibit of new varieties of potatoes	John P. Allen	Cedar Ravine
Exhibit of soda, syrups, orange cider, and bitters	J. McF. Pearson	Placerville
Twenty-seven varieties fruit in glass	Mrs. John Waters	Placerville
Largest and best exhibit of apples (thirty-four varieties)	L. Reiber	Placerville
Second best (twenty-five varieties)	Ira S. Bamber	Placerville
Third best (seventeen varieties)	R. McKay	Coloma
Fourth best (sixteen varieties)	Lewis Bros.	Prospect Flat
Largest and best display of peaches (thirty-five varieties)	J. C. Marsh	Placerville
Second best (twenty-five varieties)	L. Reiber	Six-mile House
Third best (twenty-four varieties)	I. S. Bamber	Placerville
Fourth best (twenty-four varieties)	R. McKay	Coloma
Best display of pears (nine varieties)	Lewis Bros.	Placerville
Second best (seven varieties)	T. O. Hardie	Placerville
Third best (six varieties)	Kramp & Co.	Diamond Sprgs
Fourth best (four varieties)	Thomas Fraser	Placerville
Display of garden vegetables, including new varieties	Mrs. W. H. H. Fellows	Placerville
Fancy work in roofing slate	Chili Bar Slate Co.	Chili Bar
Best general display of green fruit	Robert McKay	Coloma
Second best	J. C. Marsh	Placerville
Third best	Lewis Brothers	Placerville
Fourth best	Louis Reiber	Six-mile House
Best general display of vegetables	Louis Reiber	Six-mile House
Second best	Mrs. W. H. H. Fellows	Placerville

SPECIAL PREMIUMS—Continued.

Exhibit.	Exhibitor.	Address.	Award.
.....	F. W. McCuen	White Rock .....	.....\$30 00
.....	Lewis Brothers	Placerville .....	.....\$20 00
.....	Stephen Weymouth	Placerville .....	.....\$50 00
.....	Lewis Brothers	Placerville .....	.....\$40 00
.....	J. C. Marsh	Placerville .....	.....\$30 00

BABY SHOW.

Exhibitor.	Address.	Award.
.....	Placerville .....	.....\$10 00
.....	Middletown .....	.....\$7 50
.....	Placerville .....	.....\$5 00

TRANSACTIONS

OF THE

NINTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Humboldt and Del Norte.

REPORT.

ROHNERVILLE, CAL., 1890.

OFFICERS OF THE ASSOCIATION.

G. C. BARBER
GEORGE UNDERWOOD
LOUIS FEIGENBAUM

DIRECTORS.

G. C. BARBER
R. J. BUGBEE
B. H. McNEIL
W. S. LAMB
J. D. BARBER
G. A. BYARD
S. F. PINE
H. C. RAWSON

honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Ninth District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

GEORGE UNDERWOOD,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

License fees.....	\$710 00
Receipts.....	3,060 25
Donations.....	150 00
Salaries.....	398 00
Cost of pump.....	125 00
Receipts.....	175 50
Salaries.....	72 00
Salaries.....	5 95
Warrant.....	2,250 00
Amounts unpaid, 1890.....	199 00
of L. Feigenbaum, Treasurer.....	1,168 44
	<u>\$8,314 14</u>

Expenditures.

Amount overdrawn on Treasurer, 1889.....	\$308 65
Salaries and stakes.....	2,375 00
Salaries.....	1,834 50
Salaries.....	260 00
Printing and advertising.....	362 00
Salaries and interest.....	1,211 40
Salaries.....	1,962 59
	<u>\$8,314 14</u>

LIVE STOCK DEPARTMENT—Continued.

PREMIUMS AWARDED—1890.

LIVE STOCK DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBREDS—STALLIONS.		
Imp. Intruder	T. J. Knight	Table Bluff
Walter H. Overton	T. J. Knight	Table Bluff
Nighttime	Robert Lathrow	Table Bluff
MARES WITH COLTS.		
Linda Conner	T. J. Knight	Table Bluff
Maria	T. J. Knight	Table Bluff
MARES AND GELDINGS.		
Isabella	T. J. Knight	Table Bluff
Eola	A. H. Knight	Table Bluff
Oriola	T. J. Knight	Table Bluff
SUCKLING COLTS.		
Dick	T. J. Knight	Table Bluff
Maud	T. J. Knight	Table Bluff
CLASS II—HORSES OF ALL WORK—STALLIONS.		
Gauntlet	G. H. Gray	Hydesville
Dick Patchen	W. H. E. Smith	Rohnerville
MARES WITH COLTS.		
Clover	W. M. Fuller	Rohnerville
Julia	A. H. Myrick	Rohnerville
MARES AND GELDINGS.		
Charley, three years old	Minnie McMurtie	Hydesville
Rowdy, two years old	Wm. Forbes	Ferndale
Bismarck, two years old	Chas. Ross	Fortuna
Maud	G. Byard	Fortuna
Jane	J. D. Barber	Hydesville
SUCKLING COLTS.		
Aloha	W. M. Fuller	Rohnerville
Beka	John Pollard	Ferndale
CLASS III—DRAFT HORSES—MARES WITH COLTS.		
Dollie	James Mahan	Blue Lake
Jet	A. G. Connick	Alton
STALLIONS.		
John Shire	G. H. Gray	Hydesville
Valjean	W. H. E. Smith	Rohnerville
Farmer	James Ross	Arcata
MARES AND GELDINGS.		
Lue	W. M. Forbes	Ferndale
Daisy	James Callen	Phillipsville
Dick	H. C. Kruser	Ferndale
Dick	H. A. Myrick	Rohnerville
SUCKLING COLTS.		
Val	James Mahan	Blue Lake
Napoleon	James Lawson	Grizzly Bluff

Exhibit.	Exhibitor.	Address.	Award.
CLASS IV—ROADSTERS—STALLIONS.			
	W. H. E. Smith	Rohnerville	\$12 00
	H. S. Hogoboom	Rohnerville	\$20 00
	W. H. E. Smith	Rohnerville	\$10 00
	W. C. Helman	Rohnerville	\$12 00
	C. A. Johnston	Petrola	\$6 00
	A. C. Roussin	Ferndale	\$6 00
MARES WITH COLTS.			
	H. S. Hogoboom	Rohnerville	\$12 00
	Dr. T. D. Felt	Eureka	\$6 00
MARES AND GELDINGS.			
	A. C. Roussin	Ferndale	\$10 00
	C. E. Parrott	Rohnerville	\$5 00
	H. S. Hogoboom	Rohnerville	\$5 00
	H. S. Hogoboom	Rohnerville	\$8 00
	I. N. Minor	Arcata	\$10 00
	R. Gross	Eureka	\$4 00
SUCKLING COLTS.			
	Dr. T. D. Felt	Eureka	\$6 00
	H. A. Myrick	Rohnerville	\$3 00
CLASS V—CARRIAGE HORSES.			
	I. A. Russ	Ferndale	\$12 00
	Wm. Parrott	Table Bluff	\$4 00
BUGGY HORSES.			
	R. J. Bugbee	Ferndale	\$4 00
	Wm. Compton	Rohnerville	\$8 00
CLASS VI—DRAFT HORSES.			
	C. E. Parrott	Rohnerville	\$12 00
	D. Early	Grizzly Bluff	\$6 00
MARE HORSES.			
	W. S. Lamb	Rohnerville	\$6 00
	J. B. Howard	Rohnerville	\$3 00
CLASS VII—JACKS AND MULES.			
	N. Hurlburt	Ferndale	\$12 00
	John Walker	Hydesville	\$6 00
	John Blanton	Eureka	\$12 00
CLASS I—DURHAMS—BULLS.			
	G. H. Gray	Hydesville	\$18 00
	Wm. Forbes	Ferndale	\$9 00
	C. Decarie	Ferndale	\$12 00
	Wm. Samuels	Ferndale	\$6 00
	J. Russ	Ferndale	\$10 00
	R. W. Roberts	Ferndale	\$6 00
CLASS II—JERSEY AND ALDERNEY—BULLS.			
	J. T. Roberts	Ferndale	\$18 00
	S. F. Robinson	Rio Dell	\$9 00
COWS.			
	J. T. Roberts	Ferndale	\$12 00
	J. T. Roberts	Ferndale	\$6 00
	S. F. Robinson	Rio Dell	\$12 00
	S. F. Robinson	Rio Dell	\$10 00
CLASS III—AYRESHIRE—BULLS.			
	N. Hurlburt	Ferndale	\$18 00
	N. Hurlburt	Ferndale	\$10 00
COWS.			
	N. Hurlburt	Ferndale	\$12 00
	N. Hurlburt	Ferndale	\$6 00

LIVE STOCK DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CALVES.		
Blanche	N. Hurlburt	Ferndale
Queen	N. Hurlburt	Ferndale
CLASS IV—HOLSTEINS—BULLS.		
Dermont	A. Forbes	Eureka
Eldor	A. Forbes	Eureka
Island King	W. Forbes	Ferndale
Williams	Geo. E. Hanson	Fortuna
Ben Butler	A. Forbes	Eureka
Strathdome	A. Forbes	Eureka
Van Dyke	A. Forbes	Eureka
COWS.		
Lakeside Louise	A. Forbes	Eureka
Rosabelle Strathdome	A. Forbes	Eureka
Flora	A. Forbes	Eureka
Bellevue Bermine	A. Forbes	Eureka
Flora	Geo. Hanson	Fortuna
Bellevue Agnes	A. Forbes	Eureka
CALVES.		
Mollie	A. Forbes	Eureka
Jennie May	A. Forbes	Eureka
CLASS V—HEREFORDS—BULLS.		
What's Wanted	I. A. Russ	Ferndale
Harrison	I. A. Russ	Ferndale
Morton	I. A. Russ	Ferndale
COWS.		
Duchess	I. A. Russ	Ferndale
Muriel	I. A. Russ	Ferndale
Satanella	I. A. Russ	Ferndale
Pretty Face	I. A. Russ	Ferndale
Princess	I. A. Russ	Ferndale
Queen of Sunol	I. A. Russ	Ferndale
CLASS VI—GRADED—BULLS.		
Joe	A. Worthington	Ferndale
Dick	E. Anderson	Ferndale
Red Chieftain	N. Hurlburt	Ferndale
Charley	J. W. Kemp	Ferndale
Rob Roy	J. T. Worthington	Ferndale
Duke	John McDonough	Ferndale
Dick	J. W. Kemp	Ferndale
COWS.		
Star	J. W. Kemp	Ferndale
Maud	John McDonough	Ferndale
Holty	Chas. Bryant	Rohnerville
Queen	A. Worthington	Ferndale
Roan	A. Worthington	Ferndale
CALVES.		
Bess	A. Worthington	Ferndale
Spot	A. Worthington	Ferndale
SHEEP—CLASS I—THOROUGHBREDS.		
Shropshire ram	J. L. Versell	Hydesville
Spanish Merino ram	T. J. Knight	Table Bluff
Cotswold ram	J. W. Kemp	Ferndale
Cotswold ram	A. H. Knight	Table Bluff
Spanish Merino ram	W. S. Robinson	Bridgeville
Five Spanish Merino ewes	T. J. Knight	Table Bluff
Five Cotswold ewes	J. W. Kemp	Ferndale
Five Spanish Merino ewes	W. S. Robinson	Bridgeville
Five Cotswold ewes	A. H. Knight	Table Bluff

LIVE STOCK DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II—GRADED.			
.....	T. J. Knight	Table Bluff	\$3 00
.....	A. H. Knight	Table Bluff	\$4 00
.....	T. J. Knight	Table Bluff	\$6 00
.....	A. H. Knight	Table Bluff	\$3 00
CLASS I—THOROUGHBREDS.			
.....	A. Forbes	Eureka	\$6 00
.....	A. Forbes	Eureka	\$6 00
.....	J. W. Kemp	Ferndale	\$6 00
.....	W. Samuels	Ferndale	\$6 00
.....	W. Samuels	Ferndale	\$6 00
.....	A. Forbes	Eureka	\$6 00
.....	W. Samuels	Ferndale	\$6 00
.....	A. Forbes	Eureka	\$6 00
.....	W. Samuels	Ferndale	\$3 00
GRADED.			
.....	A. Forbes	Eureka	\$3 00
.....	A. Forbes	Eureka	\$3 00
POULTRY.			
.....	Sam Palmer	Hydesville	\$2 00
.....	Matthew Robertson	Alton	\$1 00
.....	Matthew Robertson	Alton	\$2 00
.....	Matthew Robertson	Alton	\$1 00
.....	Matthew Robertson	Alton	\$2 00
.....	Matthew Robertson	Alton	\$1 00
.....	Matthew Robertson	Alton	\$1 00
.....	J. H. Smith	Englewood	\$2 00
.....	Sam Palmer	Hydesville	\$1 00
.....	Sam Palmer	Hydesville	\$2 00
.....	Sam Palmer	Hydesville	\$2 00
.....	Sam Palmer	Hydesville	\$2 00
.....	Sam Palmer	Hydesville	\$2 00
.....	Matthew Robertson	Alton	\$1 00
.....	J. W. Kemp	Ferndale	\$2 00
.....	J. H. Smith	Englewood	\$1 00
.....	Sam Palmer	Hydesville	\$2 00
.....	Matthew Robertson	Alton	\$6 00
.....	Sam Palmer	Hydesville	\$3 00

MECHANICAL DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
.....	O. D. Whittier	Ferndale	\$3 00
.....	O. D. Whittier	Ferndale	\$1 50
.....	William Finnerty	Hydesville	\$5 00
.....	William Finnerty	Hydesville	\$5 00
.....	C. E. Gallup	Rohnerville	\$5 00
.....	O. Hammill	Rohnerville	\$5 00
.....	J. N. Lentell	Eureka	\$5 00
.....	Bert Wait	Fortuna	\$5 00
.....	A. Choep	Eureka	\$10 00
.....	Mary Reynolds	Ferndale	\$2 00

HORTICULTURAL DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
GREEN FRUIT.			
display of fruits of all kinds	A. Hansell & Sons	Camp Grant	\$20 00
do (five varieties)	J. J. Newman	Camp Grant	\$15 00
do (five varieties)	A. Hansell & Sons	Camp Grant	\$7 50
do of prunes	A. P. Compton	Rohnerville	\$5 00
do of peaches	J. J. Newman	Camp Grant	\$5 00
do of pears	G. A. Byard	Fortuna	\$3 00
do of plums	A. Forbes	Eureka	\$3 00
do of quinces	G. C. Barber	Grizzly Bluff	\$3 00
do display, fruits of all kinds	J. J. Newman	Camp Grant	\$10 00
WINES.			
do cherry wine	Mrs. B. Benson	Alton	\$2 00
do white wine	Mrs. B. Benson	Alton	\$2 00

Exhibit.	Exhibitor.	Address.	Award.
PRESERVES.			
Best display of preserves	Mrs. J. T. Mannon	Rohnerville	\$2 50
Best preserves	Mrs. J. T. Mannon	Rohnerville	\$2 00
Best plum preserves	Mrs. J. T. Mannon	Rohnerville	\$1 00
Best peach preserves	Mrs. J. T. Mannon	Rohnerville	\$2 00
Best peach preserves	Mrs. J. T. Mannon	Rohnerville	\$1 00
Best peach preserves	Mrs. L. D. Williams	Rohnerville	\$2 00
Best peach preserves	Mrs. McNeil	Rohnerville	\$5 00
Best peach preserves	Mrs. McNeil	Rohnerville	\$2 00
Best peach preserves	Mrs. McNeil	Rohnerville	\$1 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$2 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$2 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$2 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$2 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$2 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$2 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$1 00
Best apple preserves	Mrs. McNeil	Rohnerville	\$1 00
Best apple preserves	Mrs. H. Drake	Rohnerville	\$1 00
Best apple preserves	Mrs. H. Drake	Rohnerville	\$1 00
Best apple preserves	Mrs. P. F. Hart	Ferndale	\$2 00
Best apple preserves	Mrs. P. F. Hart	Ferndale	\$2 00
Best apple preserves	Mrs. P. F. Hart	Ferndale	\$2 00
Best apple preserves	Mrs. P. F. Hart	Ferndale	\$2 00
Best apple preserves	Mrs. P. F. Hart	Ferndale	\$2 00
Best apple preserves	Mrs. P. F. Hart	Ferndale	\$2 00
Best apple preserves	Mrs. M. L. Case	Rohnerville	\$1 00
Best apple preserves	Mrs. M. L. Case	Rohnerville	\$2 00
Best apple preserves	Mrs. W. E. Haight	Rohnerville	\$1 00
Best apple preserves	Mrs. Keohan	Ferndale	\$1 00
Best apple preserves	Mrs. G. C. Barber	Ferndale	\$1 00

JELLIES.			
display of jellies	Mrs. W. H. Bryan	Rohnerville	\$2 50
cherry jelly	Mrs. McNeil	Rohnerville	\$2 00
quince jelly	Mrs. McNeil	Rohnerville	\$1 00
display of jellies	Mrs. G. Underwood	Rohnerville	\$5 00
blackberry jelly	Mrs. G. Underwood	Rohnerville	\$1 00
apple jelly	Mrs. G. Underwood	Rohnerville	\$2 00
peach jelly	Mrs. G. Underwood	Rohnerville	\$2 00
apple jelly	Mrs. G. Underwood	Rohnerville	\$2 00
peach jelly	Mrs. G. Underwood	Rohnerville	\$2 00
apple jelly	Mrs. G. Underwood	Rohnerville	\$2 00
peach jelly	Mrs. G. Underwood	Rohnerville	\$1 00
apple jelly	Mrs. Thos. Shields	Rohnerville	\$2 00
peach jelly	Mrs. J. D. Rodgers	Ferndale	\$1 00
strawberry jelly	Addie Anderson	Ferndale	\$1 00
plum jelly	Mrs. J. T. Roberts	Ferndale	\$1 00
apple jelly	Mrs. P. F. Hart	Ferndale	\$2 00

Exhibit.	Exhibitor.	Address.
DRIED FRUITS.		
Best French prunes	A. P. Compton	Rohnerville.
Second best display of dried fruits	A. P. Compton	Rohnerville.
Best Golden Drop plums	A. P. Compton	Rohnerville.
Second best apples	A. P. Compton	Rohnerville.
Second best pears	A. P. Compton	Rohnerville.
Best peaches	A. P. Compton	Rohnerville.
Best display of dried fruits	G. C. Barber	Rohnerville.
Second best Silver prunes	G. C. Barber	Rohnerville.
Best pears	G. C. Barber	Rohnerville.
Second best plums	G. C. Barber	Rohnerville.
Best corn	G. C. Barber	Rohnerville.
Best apples (two varieties)	G. C. Barber	Rohnerville.

DOMESTIC DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Second best currant jelly	Mrs. Jane Vedder	Ferndale
Second best raspberry jelly	Mrs. Jane Vedder	Ferndale
JAMS.		
Best raspberry jam	Mrs. J. T. Mannon	Rohnerville
Second best	Mrs. Crawford	Ferndale
Best blackberry jam	Mrs. Crawford	Ferndale
Best display of jams	Mrs. McNeil	Rohnerville
Second best blackberry jam	Mrs. McNeil	Rohnerville
Second best plum jam	Mrs. McNeil	Rohnerville
Best currant jam	Mrs. McNeil	Rohnerville
Second best display of jams	Mrs. A. T. Baker	Grizzly Bluff
Second best currant jam	Mrs. A. T. Baker	Grizzly Bluff
FLOWERS.		
Best display of flowers	Mrs. H. Woolridge	Ferndale
Second best	Mrs. H. Woolridge	Ferndale
Best bouquet of flowers	Miss M. Woolridge	Ferndale
Second best	Miss M. Woolridge	Ferndale
BREAD AND PASTRY.		
Best wheat bread	Mrs. F. D. Hawks	Ferndale
Second best	Mrs. J. T. Mannon	Rohnerville
Best corn bread	Mrs. H. Lane	Fortuna
Second best	Mrs. R. H. Branstetter	Ferndale
Best biscuit	Mrs. J. T. Mannon	Rohnerville
Second best	Maud Harrow	Ferndale
Best display of pastry	Mrs. Joe Hull	Rohnerville
Second best	Mrs. H. Lane	Fortuna

FANCY WORK DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Best rag carpet	Mrs. W. Underwood	Fortuna
Second best	Mrs. W. Underwood	Fortuna
Best rug, braided	Mrs. I. Bresee	Fortuna
Second best	Mrs. Woolridge	Ferndale
Best yarn rug	Edna Moore	Ferndale
Second best	Mrs. E. Gregor	Eureka
Best pillow sham, outline	Miss A. Norman	Fortuna
Second best	Miss A. Anderson	Ferndale
Best pillow sham, darned net	Mrs. E. Stinson	Fortuna
Best hand sewing	Miss J. Layman	Eureka
Second best	Miss L. Gries	Ferndale
Best machine sewing	Mrs. C. F. Roberts	Eureka
Second best	Mrs. C. F. Roberts	Eureka
Best sofa pillow, chenille	Mrs. B. Dahle	Garberville
Second best	Mrs. A. H. Crabtree	Rohnerville
Best bedspread other than knit	Miss L. Gries	Ferndale
Second best	Mrs. C. Guthrie	Rohnerville
Best child's dress	Mrs. Janke	Eureka
Second best	Mrs. Janke	Eureka
Best knit bedspread	Mrs. Benson	Alton
Second best	Mrs. J. Bresee	Fortuna
Best crochet bedspread	Mrs. Poinsett	Arcata
Second best	Miss M. Jori	Eureka
Best specimen of quilting	Miss L. Gries	Ferndale
Second best	Mrs. Wolverton	Ferndale
Best arranged crazy quilt	Mrs. Sowash	Eureka
Second best	Mrs. Sowash	Eureka
Best patchwork quilt (silk)	Mrs. O. Anderson	Eureka
Second best	Mrs. J. M. Vance	Eureka
Best patchwork quilt (cotton)	Mrs. G. Connick	Alton
Second best	Mrs. A. Forbes	Eureka
Best ladies' undervest	Mrs. S. Thompson	Eureka

FANCY WORK DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Best woolen socks	Miss M. Mitchell	Rohnerville	\$1 00
Best hand-knit mittens	Mrs. A. Gill	Ferndale	\$1 00
Best crochet skirt	Mrs. A. D. Sevier	Eureka	\$0 50
Best crochet skirt	Mrs. A. D. Sevier	Eureka	\$1 00
Best crochet skirt	Mrs. H. Mercer	Eureka	\$0 50
Best crochet skirt	Mrs. E. Haight	Rohnerville	\$4 00
Best crochet skirt	Mrs. H. Lane	Fortuna	\$2 00
Best crochet tidy	Mrs. McAllester	Ferndale	\$1 00
Best crochet tidy	Mrs. S. Thompson	Eureka	\$1 00
Best crochet tidy	Miss A. Bryant	Ferndale	\$0 50
Best crochet tidy	Mrs. S. Thompson	Eureka	\$2 00
Best crochet tidy	Miss C. Kenny	Fortuna	\$1 00
Best crochet tidy	Mrs. K. Hanson	Alton	\$2 00
Best crochet tidy	Mrs. Mullen	Alton	\$1 00
Best set, crochet	Mrs. Woolridge	Ferndale	\$2 00
Best cushion	Mrs. Sowash	Eureka	\$1 00
Best sample of tatting	Mrs. N. N. Brown	Eureka	\$0 50
Best sample of tatting	Mrs. Poinsett	Arcata	\$1 00
Best sample of tatting	Mrs. Poinsett	Arcata	\$0 50
Best machine embroidery	Miss Christenson	Ferndale	\$2 00
Best machine embroidery	Mrs. W. T. Bonstell	Eureka	\$2 00
Best machine embroidery	Mrs. J. H. Smith	Camp Grant	\$1 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$2 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$1 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$2 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$1 00
Best machine embroidery	Mrs. W. T. Bonstell	Eureka	\$2 00
Best machine embroidery	Mrs. E. Galloway	Ferndale	\$2 00
Best machine embroidery	Mrs. E. Galloway	Ferndale	\$1 00
Best machine embroidery	Mrs. E. Galloway	Ferndale	\$1 00
Best machine embroidery	Mrs. E. Galloway	Ferndale	\$0 50
Best machine embroidery	Miss Kingston	Eureka	\$2 00
Best machine embroidery	Miss M. Mitchell	Rohnerville	\$1 00
Best machine embroidery	Miss E. Galloway	Ferndale	\$2 00
Best machine embroidery	Mrs. Chas. Frost	Garberville	\$1 00
Best machine embroidery	Mrs. A. D. Sevier	Eureka	\$0 50
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$4 00
Best machine embroidery	Miss Graham	Eureka	\$2 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$2 00
Best machine embroidery	Mrs. J. H. Smith	Camp Grant	\$1 00
Best machine embroidery	Mrs. E. Stinson	Fortuna	\$1 00
Best machine embroidery	Miss Kingston	Eureka	\$0 50
Best machine embroidery	Mrs. Keohan	Ferndale	\$2 00
Best machine embroidery	Mrs. J. S. Graham	Eureka	\$4 00
Best machine embroidery	Mrs. N. N. Brown	Eureka	\$2 00
Best machine embroidery	Miss Layman	Eureka	\$3 00
Best machine embroidery	Mrs. W. T. Bonstell	Eureka	\$2 00
Best machine embroidery	Mrs. W. T. Bonstell	Eureka	\$2 00
Best machine embroidery	Mrs. Sowash	Eureka	\$1 00
Best machine embroidery	Mrs. M. Benson	Alton	\$3 00
Best machine embroidery	Mrs. T. Fishpough	Fortuna	\$1 50
Best machine embroidery	Mrs. W. T. Bonstell	Eureka	\$2 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$1 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$2 00
Best machine embroidery	Mrs. J. M. Vance	Eureka	\$1 00
Best machine embroidery	Mrs. Sowash	Eureka	\$0 50
Best machine embroidery	Mrs. A. T. Baker	Ferndale	\$5 00
Best machine embroidery	Mrs. L. Reynolds	Ferndale	\$2 50
ORNAMENTAL WORK.			
Best waxwork	Mrs. Sowash	Eureka	\$1 00
Best waxwork	Mrs. Sowash	Eureka	\$0 50
Best waxwork	Mrs. S. Thompson	Eureka	\$1 00
DRAWING, ETC.			
Best oil painting	Mrs. Mullen	Arcata	\$5 00
Best oil painting	Mrs. Mullen	Arcata	\$2 50
Best oil painting	Mrs. J. M. Vance	Eureka	\$10 00
Best oil painting	Mrs. Sowash	Eureka	\$5 00

FANCY WORK DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best marine oil painting	Mrs. E. J. Mullen	Arcata
Second best	Mrs. M. Sweet	Ferndale
Best portrait oil painting	Mrs. C. S. Kendall	Eureka
Best china painting	Mrs. C. F. Roberts	Eureka
Second best	Miss K. Porter	Hydesville
Best luster painting	Mrs. C. S. Kendall	Eureka
Best water-color flowers	Mrs. C. F. Roberts	Eureka
Second best	Mrs. Keohan	Ferndale
Best crayon portrait	Mrs. C. F. Roberts	Eureka
Second best	Mrs. C. F. Roberts	Eureka
Best crayon landscape	Mrs. C. F. Roberts	Eureka
Second best	Mrs. Keohan	Ferndale
Best pencil drawing	Mrs. Keohan	Ferndale
Second best	Mrs. C. S. Kendall	Eureka
Best automatic pens	W. H. Crawford	Ferndale
Best entomological specimens	Clarence Manon	Rohnerville
Second best	Harry Swanger	Rohnerville
Best classified specimens	Annie Barber	Ferndale
JUVENILE WORK.		
Best patchwork	M. Dunlap	Ferndale
Second best	Nellie Thompson	Rohnerville
Best hand sewing	Alta Vedder	Ferndale
Best crochet work	Mary McAllester	Ferndale
Second best	Alta Vedder	Ferndale
Best cardboard work	Miss C. Chestnut	Ferndale
Best outline work	Miss E. Crabtree	Rohnerville
Best pencil drawing	Artie Drucker	Scotia
Best crayon drawing	Rosalind Decarli	Ferndale
Second best	Rosalind Decarli	Ferndale
Best map drawing	Artie Drucker	Scotia
Second best	M. Dunlap	Ferndale
Best specimen of penmanship	Rena Bonstell	Eureka
Second best	Sadie Brewer	Rohnerville

SPECIAL PREMIUMS.

Exhibit.	Exhibitor.	Address.
Best timothy seed	John Miller	Rohnerville
Best orchard grass seed	John Miller	Rohnerville
Best English soup peas	E. J. Barksdale	Table Bluff
Best graham bread	Mrs. Jennie Felt	M. G. Springs
Best light horseshoeing	Wm. Finnerly	Hydesville

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 23, 1890.

RACE No. 1—RUNNING.

All saddle horses owned in the district. Purse, thirty dollars. One half mile

Name and Pedigree of Horse.	By Whom Entered.	Address.
h. m., by Ring Gold	Davis & Crippan	Fortuna.
h. h.	W. Leer	Eureka.
W. g. m., by Connor	Eddie Tierney	Eureka.

SUMMARY.

Nellie W	1	1
Ally B	2	2

Time—0:54½; 0:56.

RACE No. 2—TROTTING.

Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Hayward	Tom Quinn	Table Bluff.
.....	B. H. McNeil	Rohnerville.
.....	W. H. E. Smith	Rohnerville.

SUMMARY.

Ally Q	1	1	1
.....	2	2	2

Time—2:42½; 2:41½; 2:45.

RACE No. 3—TROTTING.

Purse, one hundred and twenty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
h. g. s., by Poscora	— McGregor	Ferndale.
h. s., by Sterling; dam, Lady Bald	H. S. Hogoboom	Rohnerville.
h. s., by Poscora; dam, by John	A. C. Roussin	Ferndale.

SUMMARY.

.....	2	1	1	1
..... Jr.	1	2	2	2

Time—2:51; 2:53½; 2:54½; 2:57.

WEDNESDAY, SEPTEMBER 24, 1890.

RACE No. 4—RUNNING.

Purse, two hundred dollars. Three quarters of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Nellie G, d. g. m., by Sampson; dam, Gray Nell.	James Goff.	
Isabella, b. w. m., by Joe Hooker; dam, Bay Kate.	T. J. Knight.	
Nighttime, s. s., by Joe Hooker; dam, Puss.	Robert Lathrow.	

SUMMARY.

Nellie G	1 1
Nighttime	2 2
Isabella	3 3
Time—1:16½; 1:19.	

RACE No. 5—TROTTING.

For yearlings. Purse, one hundred dollars. One mile dash.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Why Not, b. f., by Waldstein; dam, by Tom Benton.	H. S. Hogoboom.	
Dignus, b. f., by Antevolo; dam, Modjeska.	N. Groton.	

SUMMARY.

Why Not	1 1
Dignus	2 2
Time—3:08½.	

RACE No. 6—TROTTING.

For local horses. Purse, one hundred and thirty dollars. Mile heats, best two.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mage, b. g.	— Gillette.	
Josie N, b. m., by Bedouin.	H. S. Hogoboom.	
Posse, c. s. m., by Poscora.	Frank Miser.	
Dandy Hayward, g. s., by Poscora.	Charles W. Landergen.	

SUMMARY.

Dandy Hayward	1 1
Posse	2 2
Josie N	3 3
Time—2:57½; 3:00.	

THURSDAY, SEPTEMBER 25, 1890.

RACE No. 7—RUNNING.

Purse, one hundred and fifty dollars. Six hundred yards.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Will Clark	George Crippan	Eureka.
T. J. Knight	T. Coleman	Rohnerville.
Louis Branstetter		Table Bluff.
		Rohnerville.
		Ferndale.

SUMMARY.

Horseman	1 1
Rondo	2 2
Time—0:33.	

RACE No. 8—RUNNING.

Purse, one hundred dollars. Half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
W. g. m., by Connor	M. Flood.	Eureka.
W. g. m., by Kirby Smith; dam, Hunke-	A. Coleman.	Rohnerville.
W. g. m., by Joe Hooker; dam, Puss.	T. J. Knight.	Table Bluff.
	Robert Lathrow	Table Bluff.

SUMMARY.

Horseman	1 1
Little Cap	2 2
Time—0:51; 0:51.	

RACE No. 9—TROTTING.

Purse, one hundred and fifty dollars. Mile heats, best two.

Name and Pedigree of Horse.	By Whom Entered.	Address.
W. g. m., by Alcazar; dam, Viola.	H. S. Hogoboom.	Rohnerville.
W. g. m., by Poscora; dam, by John Bull.	A. C. Roussin.	Ferndale.
W. g. m., by Grand Moor; dam, Lady	Lamb Bros.	Rohnerville.

SUMMARY.

W. g. m.	1 1
W. g. m.	2 2
Time—2:51½; 2:46.	

RACE No. 10—TROTTING.

2:36 Class. Purse, two hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Nellie Q, g. m., by Overland; dam, by Honest John	Tom Quinn	Table Bluff.
Pete Steinway, g. g., by Steinway; dam, Sciatica	N. Groton	Rohnerville.
Covey, b. g., by Steinway	W. H. E. Smith	Rohnerville.

SUMMARY.

Pete Steinway	1 1 1
Nellie Q	2 2 1
Covey	3 3 1

Time—2:41½; 2:39½; 2:43.

FRIDAY, SEPTEMBER 26, 1890.

RACE No. 11—RUNNING.

Free for all. Purse, two hundred dollars. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Farewell, s. s., by Nimbus	John Rows	Rohnerville.
Nellie G, s. g. m., by Sampson	James Goff	Rohnerville.
Nighttime, s. s., by Joe Hooker	Robert Lathrow	Table Bluff.
Isabella, br. w. m., by Joe Hooker	T. J. Knight	Table Bluff.

SUMMARY.

Nellie G	1
Isabella	2
Farewell	3
Nighttime	4

Time—2:18.

RACE No. 12—TROTTING.

For four-year olds and under. Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sacramento Girl	H. S. Hogoboom	Rohnerville.
Johnnie Moor	H. Haas	Rohnerville.
Mazeppa	A. C. Roussin	Rohnerville.

SUMMARY.

Sacramento Girl	1
Johnnie Moor	2

Time—2:42.

RACE No. 13—TROTTING.

For all trotters and pacers in the district. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Isabella, by H. B. Patchen; dam, by Lusbie	T. J. Knight	Table Bluff.
Isabella, by H. B. Patchen; dam, by Lusbie	R. H. Coleman	Rohnerville.
Isabella, by H. B. Patchen; dam, by Lusbie	Henry Haas	Rohnerville.

SUMMARY.

Isabella	1 1 1
Patchen	2 2 2
Haas	3 3 3

Time—2:29½; 2:32; 2:30½.

RACE No. 14—RUNNING.

For all two-year olds in the district. Purse, seventy-five dollars. Three quarters mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Isabella, by Arthur H.	Eddie Tierney	Eureka.
Isabella, by Arthur H; dam, by White Cloud	Crippan & Davis	Fortuna.
Isabella, by Arthur H; dam, by White Cloud	T. J. Knight	Table Bluff.
Isabella, by Arthur H; dam, by White Cloud	Gip	Table Bluff.

SUMMARY.

Isabella	1
Crippan	2
Haas	3

Time—1:26.

TRANSACTIONS

OF THE

THIRD DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Siskiyou and Trinity.

REPORT.

YREKA, December 31, 1890.

OFFICERS OF THE ASSOCIATION.

JAMES VANCE.....
CLARENCE S. SMITH.....
MAURICE RENNER.....

CLARENCE S. SMITH,
Secretary.

RECEIPTS AND EXPENDITURES.

DIRECTORS.

JOHN T. MOXLEY, 1890..... Oro Fino, Siskiyou
S. D. PRATHER, 1890..... Montague, Siskiyou
JAMES VANCE, 1891..... Yreka, Siskiyou
JOHN V. BROWN, 1891..... Yreka, Siskiyou
F. A. AUTENRIETH, 1892..... Yreka, Siskiyou
JOHN T. GRIFFITTS, 1892 (By W. S. Stone, proxy, Yreka, Siskiyou County)
..... Hay Fork, Trinity
J. M. WALBRIDGE, 1893..... Yreka, Siskiyou
JOHN E. HARMON, 1893..... Yreka, Siskiyou

Receipts.

Balance on hand	\$56 15	
Initiation fees	250 00	
License fees	490 00	
Membership badges	214 00	
Pavilion badges	22 50	
Privileges	594 95	
Wagon licenses	35 00	
Grand stand tickets	20 00	
Receipts	255 75	
Door receipts	20 50	
Ball receipts	125 00	
Receipts	82 50	
Contribution	274 00	
Balance on stock	122 00	
Warrant	2,250 00	
		\$4,812 35
Overdraft		75 25
		<u>\$4,887 60</u>

Expenditures.

Balance paid	\$2,375 00	
Salaries paid	1,410 50	
Printing and advertising	134 00	
Rent and fitting up Pavilion	75 00	
Wages of employees	330 00	
Cost of track and buildings damaged by storm of January,	490 00	
General expenses, sundry bills	73 10	
		<u>\$4,887 60</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS III—HORSES OF ALL WORK—STALLIONS.		
Joe E, five years old	Ned O'Neal	Gazelle.....
Spy, eight years old	C. A. Henry	Montague.....
MARES.		
Molly, four years old	A. Lee	Yreka.....
Molly, seven years old	H. L. Davis, Jr.	Little Shasta.....
CLASS IV—DRAFT HORSES—STALLIONS.		
Ernest Periot, eight years old	C. A. Henry	Montague.....
MARES.		
Frenchy, seven years old	C. A. Henry	Montague.....
CLASS V—ROADSTERS—STALLIONS.		
—, three years old	L. Swan	Yreka.....
Admar, nine years old	Shasta View St'k Fm	Montague.....
GELDING.		
Dublin Jim	J. E. McDowell	Sisson
MARES.		
Zephyr, two years old	L. Swan	Yreka.....
Susie H, seven years old, and colt.	L. Swan	Yreka.....
ROADSTER TEAM.		
Effie V and Little Mack	James Vance	Yreka.....
CLASS VI—STANDARD TROTTERS—MARES.		
Wanda, seven years old	J. M. Walbridge	Yreka.....
CLASS VII—SADDLE HORSES.		
Johnny, four years old	H. L. Davis, Jr.	Little Shasta.....
CLASS VIII—COLTS.		
Meadow King, two years old	Shasta View St'k Fm	Montague.....
—, two years old	E. L. Coonrod	Little Shasta.....
Lizzie H, one year old	C. A. Henry	Montague.....
Reyford, one year old	Shasta View St'k Fm	Montague.....
CLASS IX—JACKS AND MULES.		
Black Warrior	Matt. Fairchilds	Butte Creek.....

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBREDS.		
Tonatial (Holstein)	H. L. Davis	Little Shasta.....
Axie (Holstein)	H. L. Davis	Little Shasta.....
General Grant (Hereford)	L. Pool	Yreka.....
Jeff Davis (Hereford)	L. J. Rohrer	Little Shasta.....
Mabel (Hereford)	L. J. Rohrer	Little Shasta.....

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
(Aberdeen-Angus)	Shasta View St'k Fm	Montague.....	\$25 00
(Halloway)	Shasta View St'k Fm	Montague.....	\$25 00
(Henry)	A. Lee	Yreka.....	\$15 00
CLASS II—SWEEPSTAKES.			
— of any stock or age, Tonatial	H. L. Davis	Little Shasta.....	\$25 00
— of any stock or age, Axie	H. L. Davis	Little Shasta.....	\$15 00
— of any stock or age, Count	H. L. Davis	Little Shasta.....	\$10 00
— (Grover)	Shasta View St'k Fm	Montague.....	\$5 00
— (Hawley)	Shasta View St'k Fm	Montague.....	\$10 00
— graded calves	Shasta View St'k Fm	Montague.....	\$20 00

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
— mouth Rock chickens	Bonner McConnell	Yreka.....	\$2 00
— brown Leghorn chickens	Bonner McConnell	Yreka.....	\$2 00
— white Leghorn chickens	Mrs. M. Beaudroit	Little Shasta.....	\$2 00
— Andalusian chickens	Mrs. M. Beaudroit	Little Shasta.....	\$2 00
— Bridge Cochins	Mrs. L. Pool	Yreka.....	\$2 00

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
MECHANICAL PRODUCTS.			
— baby carriage	Nehrbass & Harmon	Yreka.....	\$10 00
— grass wagon	Swan & Lemay	Yreka.....	\$5 00
— one-made soft soap	Mrs. L. Pool	Yreka.....	\$2 00
— one-made hard soap	Mrs. N. D. Julian	Yreka.....	\$2 00
— one-made picture frame	Mrs. J. B. Cann	Yreka.....	\$2 00

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
SEWING, SHILL, AND WAXWORK.			
— needle work	Miss J. Beaudroit	Little Shasta.....	\$2 00
— one pillow shams	Miss L. Beaudroit	Little Shasta.....	\$1 50
— patchwork quilt	Mrs. L. Pool	Yreka.....	\$2 50
— silk drape	Mrs. J. B. Martin	Little Shasta.....	\$3 00
— ring tidy	Mrs. J. B. Martin	Little Shasta.....	\$2 00
— embroidery	Mrs. J. B. Martin	Little Shasta.....	\$2 00
— cover	Mrs. J. B. Martin	Little Shasta.....	\$2 00
— doormat	Mrs. Hamilton	Yreka.....	\$2 00
— patchwork	Miss Mary Wetzel	Yreka.....	\$2 00
— quilt	Mrs. J. Knapp	Yreka.....	\$5 00
— work	Mrs. J. Knapp	Yreka.....	\$2 00
— ring	Mrs. R. Cole	Henley	\$2 00
— one flowers	Miss Nellie Iunker	Yreka.....	\$2 50
— flowers	Miss Nellie Iunker	Yreka.....	\$2 50
— one work	Miss Nellie Iunker	Yreka.....	\$2 50
— one patchwork	Miss Emily Iunker	Yreka.....	\$2 00
— one afghan	Miss Emily Iunker	Yreka.....	\$2 00
— one	Miss Dora Iunker	Yreka.....	\$2 00

SEVENTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best chenille embroidery	Mrs. B. F. Smith	Yreka
Best silk embroidery	Mrs. B. F. Smith	Yreka
Best display of millinery	Mrs. B. F. Smith	Yreka
Best button rug	Mrs. Hamilton	Yreka
Best crazy quilt	Mrs. J. Carlisle	Yreka
Best hand sewing	Mrs. H. Repp	Yreka
Best goatskin mat	Mrs. J. B. Cann	Yreka
Best ribbosene work	Miss Etta Pashburg	Yreka
Best worsted crochet	Miss Emma Davis	Little Shasta

EIGHTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
BREAD, BUTTER, CANNED FRUIT, JELLIES, ETC.		
Best strained honey	Mrs. Thomas Orr	Vineland
Best comb honey	Mrs. Thomas Orr	Vineland
Best beeswax	Mrs. Thomas Orr	Vineland
Best pickled butter	Mrs. Thomas Orr	Vineland
Best currant jelly	Mrs. Thomas Orr	Vineland
Best display of dried fruits	Mrs. L. Hart	Little Shasta
Best peach jelly	Mrs. L. Hart	Little Shasta
Best preserved strawberries	Mrs. L. Hart	Little Shasta
Best preserved blackberries	Mrs. L. Hart	Little Shasta
Best fresh blackberries	Mrs. L. Hart	Little Shasta
Best dried corn	Mrs. N. D. Julian	Vineland
Best soda biscuit	Mrs. A. H. Burrows	Yreka
Best raised biscuit	Mrs. J. Carlisle	Yreka
Best raised bread	Mrs. L. Pool	Yreka
Best elderberry jelly	Mrs. H. Repp	Yreka
Best fresh butter	Mrs. J. B. Martin	Little Shasta
Best angel cake	Miss K. Madden	Yreka
Best marble cake	Miss Gertie Fried	Yreka
Best walnut cake	Miss Etta Pashburg	Yreka
Best fresh lard	Miss Leah Beaudroit	Little Shasta
Best raspberry jelly	Miss A. Beaudroit	Little Shasta
Best apricot jelly	Miss A. Beaudroit	Little Shasta
Best peach jelly	Miss A. Beaudroit	Little Shasta
Best rhubarb jelly	Miss A. Beaudroit	Little Shasta
Best cherry jelly	Miss A. Beaudroit	Little Shasta
Best strawberry jelly	Miss A. Beaudroit	Little Shasta
Best sago jelly	Miss A. Beaudroit	Little Shasta
Best prune jelly	Miss A. Beaudroit	Little Shasta
Best raspberry jam	Mrs. J. B. Martin	Little Shasta
Best grape jelly	Mrs. J. B. Martin	Little Shasta
Best tomato jelly	Mrs. J. B. Martin	Little Shasta
Best greengage jelly	Mrs. J. B. Martin	Little Shasta
Best apple marmalade	Mrs. J. B. Martin	Little Shasta
Best pumpkin marmalade	Mrs. J. B. Martin	Little Shasta
Best greengage jam	Mrs. J. B. Martin	Little Shasta
Best tomato marmalade	Mrs. J. B. Martin	Little Shasta
Best wild gooseberry jelly	Mrs. Nelson Cash	Little Shasta
Best apple jelly	Mrs. Nelson Cash	Little Shasta
Best preserved peaches	Mrs. Nelson Cash	Little Shasta
Best preserved apricots	Mrs. Nelson Cash	Little Shasta
Best preserved pears	Mrs. Nelson Cash	Little Shasta
Best preserved tomatoes	Mrs. Nelson Cash	Little Shasta
Best crabapple jelly	Mrs. H. L. Davis	Little Shasta
Best quince jelly	Mrs. H. L. Davis	Little Shasta
Best gooseberry jelly	Mrs. H. L. Davis	Little Shasta
Best apricot jam	Mrs. H. L. Davis	Little Shasta
Best preserved crabapples	Mrs. H. L. Davis	Little Shasta
Best preserved quinces	Mrs. H. L. Davis	Little Shasta
Best huckleberry jelly	Miss Emma Davis	Little Shasta
Best chokecherry jelly	Miss Clara Hetschell	Yreka

EIGHTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
plum jam	Mrs. L. Huseman	Yreka	\$1 50
preserved figs	Mrs. L. Huseman	Yreka	\$2 00
plum jelly	Mrs. A. H. Burrows	Yreka	\$2 00
strawberry jam	Mrs. A. H. Burrows	Yreka	\$1 50
strawberry jelly	Mrs. J. Knapp	Yreka	\$1 50
grape jelly	Mrs. J. Knapp	Yreka	\$2 00
strawberry jelly	Mrs. W. McConnell	Yreka	\$2 00
strawberry jam	Mrs. W. McConnell	Yreka	\$1 50
strawberry jelly	Mrs. A. Hawkins	Yreka	\$2 00
strawberry jam	Mrs. A. Hawkins	Yreka	\$2 00
strawberry jelly	Mrs. E. H. Schofield	Yreka	\$2 00
strawberry jam	Mrs. H. Repp	Yreka	\$1 50
strawberry jelly	Mrs. H. Repp	Yreka	\$1 50
strawberry jam	Mrs. H. Repp	Yreka	\$1 50
strawberry jelly	Miss L. Beaudroit	Little Shasta	\$2 00
strawberry jam	Miss A. Beaudroit	Little Shasta	\$2 00
strawberry jelly	Miss J. Beaudroit	Little Shasta	\$1 50
strawberry jam	Miss J. Beaudroit	Little Shasta	\$1 50
strawberry jelly	Miss J. Beaudroit	Little Shasta	\$2 50
strawberry jam	Miss J. Beaudroit	Little Shasta	\$1 00
strawberry jelly	Miss L. Beaudroit	Little Shasta	\$1 00
strawberry jam	Miss A. Beaudroit	Little Shasta	\$1 00
strawberry jelly	Miss A. Beaudroit	Little Shasta	\$1 00
strawberry jam	Miss M. Beaudroit	Little Shasta	\$2 50
strawberry jelly	Mrs. J. B. Martin	Little Shasta	\$1 00
strawberry jam	Mrs. J. B. Martin	Little Shasta	\$2 50
strawberry jelly	Mrs. J. B. Martin	Little Shasta	\$2 50
strawberry jam	Mrs. J. B. Martin	Little Shasta	\$1 50
strawberry jelly	Mrs. J. B. Martin	Little Shasta	\$1 50
strawberry jam	Mrs. J. B. Martin	Little Shasta	\$1 50
strawberry jelly	Mrs. J. B. Martin	Little Shasta	\$2 00
strawberry jam	Mrs. J. B. Martin	Little Shasta	\$1 50
strawberry jelly	Mrs. Nelson Cash	Little Shasta	\$1 50
strawberry jam	Mrs. Nelson Cash	Little Shasta	\$1 50
strawberry jelly	Mrs. H. L. Davis	Little Shasta	\$1 50
strawberry jam	Mrs. H. L. Davis	Little Shasta	\$1 50
strawberry jelly	Miss Emma Davis	Little Shasta	\$1 50
strawberry jam	Miss Emma Davis	Little Shasta	\$1 50
strawberry jelly	Miss Clara Hetschell	Yreka	\$1 50
strawberry jam	Miss Etta Pashburg	Yreka	\$1 50
strawberry jelly	Mrs. J. Pashburg	Yreka	\$1 50
strawberry jam	Mrs. J. Pashburg	Yreka	\$1 50
strawberry jelly	Mrs. J. Pashburg	Yreka	\$1 50
strawberry jam	Mrs. J. Pashburg	Yreka	\$1 50
strawberry jelly	Mrs. L. Huseman	Yreka	\$2 00
strawberry jam	Mrs. L. Huseman	Yreka	\$1 50
strawberry jelly	Mrs. L. Huseman	Yreka	\$1 50
strawberry jam	Mrs. L. Huseman	Yreka	\$1 50

NINTH DEPARTMENT (JUVENILE).

Exhibit.	Exhibitor.	Address.	Award.
drawing	Orris Harmon	Yreka	\$2 50
penmanship	Orris Harmon	Yreka	\$2 50
knitting	Orris Harmon	Yreka	\$5 00
made bread	Martha Knapp	Yreka	\$5 00
crochet	Martha Knapp	Yreka	\$2 00
crochet	Martha Knapp	Yreka	\$2 00
crochet	Martha Knapp	Yreka	\$1 50
crochet	Martha Knapp	Yreka	\$2 50
crochet	Daisy Pashburg	Yreka	\$2 00
crochet	Daisy Pashburg	Yreka	\$2 00
crochet	Daisy Pashburg	Yreka	\$5 00

NINTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best coffee cake.....	Daisy Pashburg.....	Yreka.....
Best charcoal drawing.....	Henry Schroder.....	Yreka.....
Best hand-made dress.....	Alda Coonrod.....	Little Shasta.....

TENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
AGRICULTURAL PRODUCTIONS, ETC.		
Best ham.....	C. Schock.....	Yreka.....
Best display of millstuff.....	Vance & Walbridge.....	Yreka.....
Best currant wine.....	Mrs. L. Huseman.....	Yreka.....
Best variety of peaches.....	Mrs. L. Huseman.....	Yreka.....
Best cider vinegar.....	Mrs. Thos. Orr.....	Vineland.....
Best popcorn.....	Mrs. Charles Orr.....	Vineland.....
Best barley.....	N. D. Julian.....	Vineland.....
Best broomcorn.....	George Julian.....	Vineland.....
Best squash.....	George Julian.....	Vineland.....
Best tomatoes.....	George Julian.....	Vineland.....
Best turnip beets.....	Antone Foster.....	Hawkinsville.....
Best variety of carrots.....	Antone Foster.....	Hawkinsville.....
Best Vulcan seed onions.....	Antone Foster.....	Hawkinsville.....
Best flat Dutch cabbage.....	Antone Foster.....	Hawkinsville.....
Best Peerless potatoes (early).....	Antone Foster.....	Hawkinsville.....
Best sugar corn.....	Antone Foster.....	Hawkinsville.....
Best Indian corn.....	Antone Foster.....	Hawkinsville.....
Best cucumbers.....	Louis Beaudroit.....	Little Shasta.....
Best French beans.....	Mrs. M. Beaudroit.....	Little Shasta.....
Best late or winter potatoes.....	Nelson Cash.....	Little Shasta.....
Best three varieties winter apples.....	John Miller.....	Little Shasta.....
Best French prunes.....	John Miller.....	Little Shasta.....
Best wheat.....	H. L. Davis.....	Little Shasta.....
Best ten varieties plums.....	Mrs. H. L. Davis.....	Little Shasta.....
Best quinces.....	Miss Addie Rohrer.....	Little Shasta.....
Best ten varieties apples.....	B. B. Jackson.....	Klamath River.....
Best grapes.....	B. B. Jackson.....	Klamath River.....
Best pears.....	B. B. Jackson.....	Klamath River.....

ELEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
FINE ARTS.		
Best ivory painting.....	Miss Gertie Nixon.....	Yreka.....
Best painting on glass.....	Miss Gertie Nixon.....	Yreka.....
Best porcelain painting.....	Miss Gertie Nixon.....	Yreka.....
Best painting on oilcloth.....	Miss Gertie Nixon.....	Yreka.....
Best decorated mirror.....	Miss Gertie Nixon.....	Yreka.....
Best painting on bolting silk.....	Miss Agnes Vance.....	Yreka.....
Best oil painting (picture).....	Miss Agnes Vance.....	Yreka.....
Best oil painting (landscape).....	Miss Agnes Vance.....	Yreka.....
Best oil painting (flowers).....	Miss Agnes Vance.....	Yreka.....
Best pencil drawing.....	Miss Agnes Vance.....	Yreka.....
Best oil painting (cherries and peaches).....	Miss Lena Burrows.....	Yreka.....
Best oil painting (screen).....	Miss Mary Wetzel.....	Yreka.....
Best painting on silk.....	Miss Nellie Junker.....	Yreka.....
Best crayon drawing.....	Miss Alice Powers.....	Yreka.....
Best painting on chamois.....	Miss Minnie Iffland.....	Yreka.....
Best water-color painting.....	Miss Minnie Iffland.....	Yreka.....
Best painting on china.....	Miss Minnie Iffland.....	Yreka.....

TWELFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
FLORAL.			
Best plants.....	Mrs. A. H. Burrows.....	Yreka.....	\$5 00
Best flowers (dahlias).....	Mrs. A. Wetzel.....	Yreka.....	\$2 50
Best.....	Mrs. G. A. Nordheim.....	Yreka.....	\$5 00
Best.....	Mrs. L. Huseman.....	Yreka.....	\$2 50

SPEED PROGRAMME.

THURSDAY, OCTOBER 2, 1890.

RACE No. 1—TROTTING.

8:00 Class. Purse, one hundred and fifty dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Little Mack, b. g.	James Vance	
Ante-Echo, b. s.	L. Swan	
E P, b. g.	J. W. Powers	

SUMMARY.

Ante-Echo	2 1 1
E P	1 1 1
Little Mack	3 3 3

Time—2:53; 2:43; 2:53.

RACE No. 2—RUNNING.

Free for all. Purse, one hundred and fifty dollars. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Bingo, b. g.	J. W. Withrow	
Klickatat, b. g.	Al. Martin	
Katisha, b. m.	D. F. Hill	
Red Cloud, b. s.	A. F. Murray	

SUMMARY.

Bingo	1
Klickatat	2
Katisha	3

Time—0:51½; 0:51½.

RACE No. 3—TROTTING.

For district two-year olds. Purse, one hundred and fifty dollars. Mile heats, best in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Midnight, b. g.	Shasta View St'ck F'm	
Zephyr, b. f.	L. Swan	

SUMMARY.

Zephyr	1
Midnight	2

Time—2:59½; 2:55.

FRIDAY, OCTOBER 3, 1890.

RACE No. 4—RUNNING.

Purse, two hundred dollars. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
...	F. P. Norton	Marshfield, Or.
...	J. H. Muse	Sacramento.
...	Chas. Cusick	Redding.

SUMMARY.

...	1
...	2 dr.
...	0

Time—1:49½; 2:10.

RACE No. 5—TROTTING.

Purse, two hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
...	J. M. Walbridge	Yreka.
...	James Vance	Yreka.
...	S. V. S. F.	Montague.

SUMMARY.

...	1
...	2
...	3 dr.

Time—2:37½; 2:36½; 2:54½.

RACE No. 6—TROTTING.

Purse, two hundred dollars. Mile heats, best three-year olds and under.

Name and Pedigree of Horse.	By Whom Entered.	Address.
...	L. Swan	Yreka.
...	S. V. S. F.	Montague.

SUMMARY.

...	1
...	2

Time—2:53; 2:51½.

SATURDAY, OCTOBER 4, 1890.

RACE No. 7—RUNNING.

Free for all. Purse, one hundred and fifty dollars. Three quarters of a mile and

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wild Oats.....	J. H. Muse.....	.....
Bingo.....	J. W. Withrow.....	.....
Jem Mace.....	Chas. Cusick.....	.....

SUMMARY.

Bingo.....	1 1
Wild Oats.....	2 2
Jem Mace.....	3 3

Time—1:18½; 1:19.

RACE No. 8—TROTTING.

For district four-year olds and under. Purse, two hundred dollars. Mile heats, three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Little Mack.....	James Vance.....	.....
Ante-Echo.....	L. Swan.....	.....

SUMMARY.

Ante-Echo.....	1 1 1
Little Mack.....	2 2 2

Time—2:54; 2:55½; 2:51.

RACE No. 9—TROTTING.

For district yearlings. Purse, one hundred and fifty dollars. One half mile, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Reyford.....	S. V. S. F.....	.....
Miss Hogan.....	J. M. Walbridge.....	.....

SUMMARY.

Miss Hogan.....	1 1 1
Reyford.....	2 2 2

Time—1:45; 1:42.

RACE No. 10—RUNNING.

Free for all. Purse, one hundred dollars. Three quarters of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	Charles Cusick.....	..... Redding.
.....	F. P. Norton.....	..... Marshfield, Or.
.....	James Aiken.....	..... Marshfield, Or.
.....	A. Magill.....	..... Edgewood.

SUMMARY.

.....	1 1
.....	2 2
.....	3 3
.....	1. p.

Time—0:35; 0:36.

MONDAY, OCTOBER 6, 1890.

RACE No. 11—RUNNING.

Free for all. Purse, one hundred dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	J. H. Muse.....	..... Sacramento.
.....	D. F. Hill.....	..... Yreka.
.....	Al. Martin.....	..... Central Point, Or.

SUMMARY.

.....	1
.....	2
.....	3

Time—1:46½.

RACE No. 12—TROTTING.

Free for all district horses. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	J. M. Walbridge.....	..... Yreka.
.....	James Vance.....	..... Yreka.
.....	L. Swan.....	..... Yreka.

SUMMARY.

.....	1 1 1
.....	2 2 2
.....	3 2 3

Time—2:38; 2:37½; 2:36.

RACE No. 13—RUNNING.

Novelty sweepstake. Free for all. Purse, one hundred dollars. Thirty dollars at first quarter, thirty dollars at second quarter, and forty dollars at finish. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Tammany	A. Magill	Elgin
Bingo	J. W. Withrow	Eugene Ore
Arago	F. P. Norton	Marshall

SUMMARY.

Tammany

Won first quarter.

Bingo

Won second and third quarters.

Time—Quarter, 0:24; half, 0:49½; three quarters, 1:20.

RACE No. 14—RUNNING.

For defeated horses at this meeting. Purse, fifty dollars. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sammy H	James Aiken	Marshall
Klickatat	Al. Martin	Central Pa
Baldy	F. P. Norton	Marshall

SUMMARY.

Sammy H

Klickatat

Baldy

Time—0:53.

TRANSACTIONS

OF THE

TENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Plumas, Lassen, Sierra, and Modoc.

REPORT.

QUINCY, November 26, 1890.

OFFICERS OF THE ASSOCIATION.

J. W. THOMPSON
E. HUSKINSON
J. H. WHITLOCK

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Eleventh District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

E. HUSKINSON,
Secretary.

DIRECTORS.

J. W. THOMPSON
J. D. BYERS
J. J. REAVIS
W. P. HALL
J. McBETH
J. STEPHAN
J. S. BRANSFORD
J. S. CARTER

RECEIPTS AND EXPENDITURES.

Receipts.

Balance from last year.....	\$1,330 52
Balance.....	3,440 00
Money.....	1,345 00
.....	745 00
Subscription.....	5,144 00
Warrant.....	2,500 00
Butt.....	178 00
	<u>\$14,682 52</u>

Expenditures.

Directors' meeting, May and August.....	\$190 00
Membership in National Trotting Association.....	50 00
Printing and printing.....	634 75
.....	350 00
Building at Park.....	723 52
.....	2,051 35
.....	8,112 75
.....	2,862 50
	<u>\$14,974 87</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBRED HORSES—STALLIONS.		
Keystone	S. S. Ford	Alturas
Bolinger	A. Cortright	Alturas
MARE AND COLT.		
Mare	Joe Dyson	Summit
Colt	Joe Dyson	Summit
CLASS II—ROADSTERS—STALLIONS.		
Sierra Boy	D. D. Newman	Sierraville
Gus Payne	J. S. Bransford	Greenville
GELDINGS.		
Schneider	B. Schneider	Quincy
Mistake	L. Levy	Sierraville
MARES.		
Nellie	L. E. Austin	Greenville
	J. C. Knickrem	Mohawk
CLASS III—CARRIAGE TEAMS.		
Jane and Bell	W. E. McNeil	Quincy
Jack and Delaney	Jake Stephan	Quincy
CLASS IV—SWEEPSTAKES.		
Gus Payne	J. S. Bransford	Greenville
Sparkle	Geo. Doherty	Greenville
CLASS V—DRAFT HORSES.		
Pet (Clydesdale)	E. D. Hosselkus	Genesee
Mrs. Jake (Norman)	E. D. Hosselkus	Genesee
Black Bess (Norman)	W. P. Hall	Susanville
Lucy (Norman)	E. D. Hosselkus	Genesee
Suckling colt	E. D. Hosselkus	Genesee
Suckling colt	J. M. Cadle	Greenville
CLASS VI—HORSES OF ALL WORK—STALLIONS.		
Mountain King	Chas. Bonta	Mohawk
—, two years old	G. A. Doherty	Greenville
—, one year old	Frank Kruger	Greenville
—, one year old	J. O. Hemler	Susanville
—, suckling colt	Chas. Bonta	Mohawk
—, suckling colt	M. Dunham	Quincy
—, suckling colt	J. H. Yeates	Quincy
MARES.		
Mollie	J. S. Bransford	Greenville
—	Tim. Flanigan	Quincy
Mare and colt	J. W. Thompson	Quincy
Mare and colt	J. H. Yeates	Quincy
Wapple	W. P. Hall	Susanville
—, two years old	J. M. Cadle	Greenville
Mare colt	Geo. Standart	Greenville
Mare colt	J. W. Thompson	Quincy

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
GELDINGS.			
—, two years old	Frank Chandler	Quincy	\$20 00
—, two years old	Jerry Evans	Indian Valley	\$12 00
—, two years old	B. C. Lorich	Quincy	\$7 50
GENERAL DRAFT—STALLIONS.			
—, Jr.	M. Misenheimer	Quincy	\$30 00
—, Jr.	J. M. Cadle	Greenville	\$15 00
—, Jr.	H. C. Flournoy	Genesee	\$20 00
GELDINGS.			
—, two years old	John W. Starks	Taylorsville	\$20 00
—, two years old and over	John Clinch	Quincy	\$10 00
—, two years old	W. E. Mills	Quincy	\$15 00
—, one year old	W. E. Mills	Quincy	\$12 00
MARES.			
—, two years old	M. Dunham	Quincy	\$20 00
—, two years old	J. M. Cadle	Greenville	\$10 00
—, two years old	W. E. Mills	Quincy	\$15 00
—, one year old	Mrs. M. Johnson	Quincy	\$12 00
FAMILIES.			
—, family (Norman)	E. D. Hosselkus	Genesee	\$30 00
—, family	J. W. Thompson	Quincy	\$30 00
—, family	Frank Kruger	Greenville	\$15 00
CLASS VIII—DRAFT TEAMS.			
—, Prince	John Clinch	Quincy	\$25 00
—, and Charlie	Jake Stephan	Quincy	\$15 00
CLASS I—JERSEYS—BULLS.			
—, 4th	W. P. Hall	Susanville	\$30 00
—, 6th	W. P. Hall	Susanville	\$20 00
—, 7th	W. P. Hall	Susanville	\$15 00
—, 8th	W. P. Hall	Susanville	\$10 00
COWS.			
—, two years old	W. P. Hall	Susanville	\$25 00
—, two years old	W. P. Hall	Susanville	\$12 50
—, two years old	W. P. Hall	Susanville	\$20 00
—, two years old	W. P. Hall	Susanville	\$10 00
—, two years old	W. P. Hall	Susanville	\$15 00
—, two years old	W. P. Hall	Susanville	\$7 50
—, two years old	W. P. Hall	Susanville	\$10 00
—, two years old	W. P. Hall	Susanville	\$5 00
CLASS II—DURHAMS—BULLS.			
—, two years old	Frank Chandler	Quincy	\$30 00
—, two years old	E. D. Hosselkus	Genesee	\$15 00
—, two years old	Perry Bros.	Greenville	\$20 00
COWS.			
—, two years old	E. D. Hosselkus	Genesee	\$25 00
—, two years old	E. D. Hosselkus	Genesee	\$12 50
SWEEPSTAKES.			
—, one	Wm. Cottingham	Taylorsville	\$50 00
—, one	W. E. Mills	Quincy	\$40 00
CLASS III—HOLSTEINS—BULLS.			
—, two years old	Wm. Cottingham	Taylorsville	\$20 00
—, two years old	W. E. Mills	Quincy	\$15 00
—, two years old	J. W. Thompson	Quincy	\$30 00
—, two years old	W. E. Mills	Quincy	\$15 00
—, two years old	J. W. Thompson	Quincy	\$10 00

First Department--Continued.

Exhibit.	Exhibitor.	Address.
COWS.		
—, three years old	W. E. Mills	Quincy
—, three years old	W. E. Mills	Quincy
—, two years old	J. W. Thompson	Quincy
Plumas Beauty, one year old	J. W. Thompson	Quincy
—, one year old	W. E. Mills	Quincy
Calf	J. W. Thompson	Quincy
Calf	J. W. Thompson	Quincy
CLASS IV—GRADED CATTLE—BULLS.		
Billy, two years old	J. Stephan	Quincy
—, three years old	D. R. Cate	Quincy
COWS.		
—,	D. Robertson	Quincy
—,	J. H. Larison	Quincy
Calf	D. Robertson	Quincy
Calf	J. F. Evans	Quincy
SHEEP.		
Ram	John Clinch	Quincy
Ewe	John Clinch	Quincy
Four sheep	D. R. Finlayson	Quincy
SWINE.		
Boar	J. M. Cadle	Greenville
Sow	J. M. Cadle	Greenville
Berkshire boar	W. E. Mills	Quincy
Berkshire sow	W. E. Mills	Quincy
Pen of pigs	W. E. Mills	Quincy
Pen of pigs	W. E. Mills	Quincy
Berkshire sow	D. R. Finlayson	Quincy
Berkshire sow	D. R. Finlayson	Quincy
Poland-China boar	D. Robertson	Quincy
Poland-China boar	D. R. Cate	Quincy
Pen of pigs	D. R. Cate	Quincy
SWINE—SWEEPSTAKES.		
Boar	W. E. Mills	Quincy
Sow	W. E. Mills	Quincy
POULTRY.		
Houdans	E. Eaton	Quincy
Common fowls	D. Stahley	Quincy
Turkeys	E. Eaton	Quincy

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Outline pillow shams	Mary Eaton	Quincy
Rug	Lizzie Carmichael	Gibsonville
Rag carpet	Mrs. W. McClelland	Susanville
Collection of rugs	Mrs. S. Schroeder	Loyalton
Braided rug	Mrs. S. Schroeder	Loyalton
Silk and wool quilt	Mrs. S. Schroeder	Loyalton
Log cabin quilt	Mrs. N. Fletcher	Quincy
Child's dress	Mrs. T. C. Lee	Quincy
Knit skirt	Kittie Goodwin	Quincy
White skirt	Kate Chandler	Quincy
Double knit skirt	Mrs. Carrie Parker	Quincy
Knit slippers	Mrs. Carrie Parker	Quincy
Knit shams	Mrs. Carrie Parker	Quincy
Crazy quilt, wool	Mrs. M. Johnson	Quincy
Infant's knit skirt	Mrs. H. P. Wormley	Quincy

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
quilt, wool	Mrs. D. R. Cate	Quincy	\$2 50
	Mamie L. Cate	Quincy	\$1 00
	Mrs. J. W. Larison	Quincy	\$1 00
	Mrs. M. Knoll	Crescent Mills	\$2 00
	Mrs. W. H. Leek	Quincy	\$4 00
	Mrs. Ebberts	Quincy	\$4 00
	Mrs. A. W. Keddle	Quincy	\$3 00
	Mrs. A. W. Keddle	Quincy	\$7 00
	Mrs. J. Edwards	Quincy	\$1 50
	Emma J. Robinson	Toll Gate	\$7 00
	Mrs. W. M. Robinson	Toll Gate	\$2 50
	Mrs. W. M. Robinson	Toll Gate	\$3 00
	Mrs. W. M. Robinson	Toll Gate	\$1 00
	Mrs. W. M. Robinson	Toll Gate	\$1 00
	Mrs. J. Braden	Quincy	\$2 00
	Mrs. E. Garner	Quincy	\$1 00
	Mrs. John Tucker	Meadow Valley	\$2 00
	Mrs. Donnenworth	Taylorville	\$1 50
	Mrs. R. W. Young	Crescent Mills	\$1 50
	Georgette Braden	Quincy	\$2 00
	Georgette Braden	Quincy	\$2 00
	Mary L. Hosselkus	Genesee	\$2 00
	Ida Barker	Quincy	\$10 00
	Mrs. John Barker	Quincy	\$2 00
	Mrs. M. A. Perry	Greenville	\$1 50
	Mrs. T. Neal	Quincy	\$2 00
	Mrs. W. C. Bringham	Beckwith	\$4 00
	Mrs. E. T. Hogan	Quincy	\$1 50
	Mrs. S. N. Cameron	Quincy	\$2 00
	Mrs. G. G. Clough	Quincy	\$3 50
	Mrs. Chas. Bonta	Mohawk	\$1 00
	Mrs. Mary Hann	Quincy	\$3 00
	Georgette Braden	Quincy	\$2 00
	Christine Knoll	Crescent Mills	\$5 00
	Mrs. D. C. Hall	Quincy	\$10 00
	Mrs. Loring	Quincy	\$2 00
CLASS II.			
	Mrs. E. Eaton	Quincy	\$1 00
	Lizzie Carmichael	Gibsonville	\$2 00
	Lizzie Carmichael	Gibsonville	\$1 00
	Mrs. N. Fletcher	Quincy	\$2 00
	Mrs. T. C. Lee	Quincy	\$2 00
	Mrs. T. C. Lee	Quincy	\$2 00
	Mrs. T. C. Lee	Quincy	\$1 00
	Mrs. J. E. Smith	Quincy	\$2 00
	Mrs. J. E. Smith	Quincy	\$2 00
	Mrs. J. E. Smith	Quincy	\$1 00
	Mrs. J. E. Smith	Quincy	\$1 00
	Mrs. J. E. Smith	Quincy	\$2 00
	Mrs. J. E. Smith	Quincy	\$1 00
	Mrs. J. E. Smith	Quincy	\$1 00
	Mrs. C. J. Lee	Quincy	\$3 00
	Mrs. C. J. Lee	Quincy	\$1 00
	Mrs. J. Stephens	Quincy	\$2 00
	Mrs. J. C. Knickrem	Mohawk	\$2 00
	Mrs. J. C. Knickrem	Mohawk	\$2 00
	Mrs. J. C. Knickrem	Mohawk	\$1 00
	Mrs. J. C. Berg	Quincy	\$2 00
	Mrs. Kate Chandler	Quincy	\$2 00
	Mrs. Kate Chandler	Quincy	\$2 00
	Mrs. W. Schneider	Quincy	\$1 00
	Mrs. Carrie Parker	Quincy	\$2 00
	Mrs. Carrie Parker	Quincy	\$2 00
	Mrs. Carrie Parker	Quincy	\$2 00
	Mrs. Carrie Parker	Quincy	\$1 00
	Mrs. H. P. Wormley	Quincy	\$1 00
	Mrs. H. P. Wormley	Quincy	\$1 00
	Mamie L. Cate	Quincy	\$2 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Chair cushion	Mrs. Kate Chandler	Quincy
Piano cover	Mrs. Carrie Parker	Quincy
Head rest	Mrs. W. H. Leek	Quincy
Braiding	Mrs. Wm. Watson	Quincy
Silk embroidery	Mrs. Wm. Watson	Quincy
Display of point lace	Mrs. Wm. Watson	Quincy
Lady's crochet skirt	Minnie Blakesley	Quincy
Crochet slippers	Minnie Blakesley	Quincy
Wool tidy	Minnie Blakesley	Quincy
Head rest	Emma J. Robinson	Toll Gate
Display of crochet work	Emma J. Robinson	Toll Gate
Display of outline work	Emma J. Robinson	Toll Gate
Photograph case	Emma J. Robinson	Toll Gate
Display of fringe	Mrs. W. M. Robinson	Toll Gate
Paper safe	Mrs. J. Braden	Quincy
Embroidered handkerchief case	Jennie Braden	Quincy
Crochet scarf	Mrs. E. Garner	Quincy
Crochet slippers	Jennie Garner	Quincy
Hemstitching and drawn work	Mrs. John Tucker	Meadow Valley
Point lace handkerchief	Mattie Cate	Quincy
Mantel lambrequin	Georgette Braden	Quincy
Satchet	Georgette Braden	Quincy
Embroidered handkerchief	Georgette Braden	Quincy
Display of outline work	Georgette Braden	Quincy
Embroidered suspenders	Georgette Braden	Quincy
Arabian embroidery	Mrs. W. W. Kellogg	Quincy
Kensington embroidery	Mrs. W. W. Kellogg	Quincy
Hemstitching	Mrs. W. W. Kellogg	Quincy
Muskmelon seed bag	Flora Gansner	Quincy
Table scarf	Flora Gansner	Quincy
Sofa pillow, Arabian embroidery	Louie Kaulback	Quincy
Macrame work	Louie Kaulback	Quincy
Netted guipure tidy	Louie Kaulback	Quincy
Game bag	Louie Kaulback	Quincy
Banner	Louie Kaulback	Quincy
Novelty braid	Mabel Kaulback	Quincy
Bead work	Miss M. B. Whiting	Quincy
Baby's crochet afghan	Miss E. B. Whiting	Quincy
Crochet corsage yoke	Miss Clara Schubert	Quincy
Zephyr tidy	Miss Clara Schubert	Quincy
Arrasene embroidery	Mrs. G. G. Clough	Quincy
Skeleton embroidery	Mrs. G. G. Clough	Quincy
Darn net lace work	Mrs. G. G. Clough	Quincy
Linen table scarf	Mrs. G. G. Clough	Quincy
Set table mats	Mrs. G. G. Clough	Quincy
Repoussé work	Mrs. G. G. Clough	Quincy
Drape	Mrs. G. G. Clough	Quincy
Crochet bedspread	Mrs. Chas. Bonta	Mohawk
Tufted work	Mrs. Chas. Bonta	Mohawk
Infant's robe	Mrs. Chas. Bonta	Mohawk
Drawn work	Mrs. W. C. Bacon	Sierra Valley
Bureau scarf	Mrs. W. C. Bacon	Sierra Valley
Tidy	Mrs. W. C. Bacon	Sierra Valley
Lamp shade	Mrs. J. W. Thompson	Quincy
Lamp mat	Mrs. J. W. Thompson	Quincy
Fancy apron	Mary E. Borroughs	Susanville
Table scarf	Mary E. Borroughs	Susanville
Embroidered piano cover	Mattie Goodwin	Quincy
Necktie case	Louie Kaulback	Quincy
Crochet shawl	Mrs. J. W. Larison	Quincy
Hand-made skirt	Mrs. M. Knoll	Crescent Mills
Child's braided suit	Christine Knoll	Crescent Mills
Infant's embroidered skirt	Mrs. W. Watson	Quincy
Sofa cushion, Roman embroidery	Dodie A. Thompson	Quincy
Display of point lace	Mrs. M. Dunham	Quincy
Sofa cushion	Miss Clara Root	Quincy

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CHILDREN'S DEPARTMENT.			
Chair cushion	Carrie Eaton	Quincy	\$0 50
Chair holes	Carrie Eaton	Quincy	\$0 50
Wool tidy	Sadie Crow	Quincy	\$1 00
Table scarf	Sadie Crow	Quincy	\$1 00
Table scarf	Sadie Crow	Quincy	\$1 00
Table scarf	Sadie Crow	Quincy	\$0 50
Table scarf	Ethel Fletcher	Quincy	\$1 00
Table scarf	Ethel Fletcher	Quincy	\$1 00
Table scarf	Ethel Fletcher	Quincy	\$1 00
Table scarf	Ethel Fletcher	Quincy	\$2 00
Table scarf	Ethel Fletcher	Quincy	\$2 00
Table scarf	Nellie Berg	Quincy	\$1 50
Table scarf	Nellie Berg	Quincy	\$1 50
Table scarf	Nellie Berg	Quincy	\$1 50
Table scarf	Nellie Berg	Quincy	\$1 00
Table scarf	Dora Johnson	Quincy	\$4 00
Table scarf	Amy Sauer	Quincy	\$2 00
Table scarf	Amy Sauer	Quincy	\$1 00
Table scarf	Amy Sauer	Quincy	\$1 00
Table scarf	Amy Sauer	Quincy	\$1 00
Table scarf	Amy Sauer	Quincy	\$1 00
Table scarf	Lizzie Larison	Quincy	\$1 00
Table scarf	Lizzie Larison	Quincy	\$1 00
Table scarf	Lizzie Larison	Quincy	\$1 00
Table scarf	Minerva Hyde	Spanish Ranch	\$1 00
Table scarf	Minerva Hyde	Spanish Ranch	\$1 00
Table scarf	Minerva Hyde	Spanish Ranch	\$1 00
Table scarf	Minerva Hyde	Spanish Ranch	\$1 00
Table scarf	Minerva Hyde	Spanish Ranch	\$1 00
Table scarf	Minerva Hyde	Spanish Ranch	\$1 00
Table scarf	Nellie Keddie	Quincy	\$1 50
Table scarf	Nellie Keddie	Quincy	\$1 00
Table scarf	Nellie Keddie	Quincy	\$1 00
Table scarf	Nellie Keddie	Quincy	\$0 50
Table scarf	John Donnenworth	Taylorville	\$1 00
Table scarf	John Donnenworth	Taylorville	\$1 00
Table scarf	Ethel Cate	Quincy	\$1 00
Table scarf	Etta Perry	Greenville	\$1 00
Table scarf	Etta Perry	Greenville	\$2 00
Table scarf	Tena Gausner	Quincy	\$1 00
Table scarf	Tena Gausner	Quincy	\$1 00
Table scarf	Tena Gausner	Quincy	\$1 00
Table scarf	Tena Gausner	Quincy	\$1 00
Table scarf	Tena Gausner	Quincy	\$1 00
Table scarf	Tena Gausner	Quincy	\$1 00
Table scarf	Lena Gausner	Quincy	\$1 00
Table scarf	Lena Gausner	Quincy	\$1 00
Table scarf	Lena Gausner	Quincy	\$1 00
Table scarf	Lena Gausner	Quincy	\$0 50
Table scarf	Lena Gausner	Quincy	\$1 00
Table scarf	Ida Dorsch	Quincy	\$0 50
Table scarf	Katie Dorsch	Quincy	\$1 00
Table scarf	Maggie Hogan	Quincy	\$2 00
Table scarf	Maggie Hogan	Quincy	\$3 00
Table scarf	Cecelia Hogan	Quincy	\$1 00
Table scarf	Annie Sutton	Quincy	\$1 50
Table scarf	Annie Sutton	Quincy	\$1 00
Table scarf	Annie Sutton	Quincy	\$1 00
Table scarf	Jennie Sutton	Quincy	\$1 00
Table scarf	Jennie Sutton	Quincy	\$1 00
Table scarf	Jennie Sutton	Quincy	\$1 50
Table scarf	Pearlie Whiting	Quincy	\$3 00
Table scarf	Ferd. Hogan	Quincy	\$1 00
Table scarf	Nellie Cameron	Quincy	\$2 00
Table scarf	Ruth Clough	Quincy	\$1 00
Table scarf	Frank Whiting	Quincy	\$1 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Champion tomatoes	Geo. Donnenworth	Taylorsville.
China Red-eyed beans	Geo. Donnenworth	Taylorsville.
Field peas	Geo. Donnenworth	Taylorsville.
Citron melon	Geo. Donnenworth	Taylorsville.
Blood turnip beet	J. H. Ulch	Quincy.
Rye	E. Hosselkus	Genesee.
Redtop seed	J. M. Cadle	Greenville.
Cracker onions	J. W. Thompson	Quincy.
Jumbo beets	J. W. Thompson	Quincy.
Sugar beets	J. W. Thompson	Quincy.
Pumpkins	J. W. Thompson	Quincy.
Best and largest collection of vegetables	J. W. Thompson	Quincy.
Cauliflower	D. R. Cate	Quincy.
Montreal muskmelon	Robert Martin	Shoo Fly
Two varieties peaches	Robert Martin	Shoo Fly
Exhibit of peaches	Robert Martin	Shoo Fly
Yellow egg plum	Robert Martin	Shoo Fly
Hubbard squash	Mrs. J. Edwards	Quincy.
Mangel-wurzels	J. H. Yeates	Quincy.
White Belgian carrots	J. H. Yeates	Quincy.
Mammoth squash	J. H. Yeates	Quincy.
Drumhead cabbage	J. H. Yeates	Quincy.
Dutch cabbage	J. H. Yeates	Quincy.
Winningstadt cabbage	J. H. Yeates	Quincy.
Gherkins	J. G. Maxwell	Quincy.
Grapes	J. W. Thompson	Quincy.
Rye	Jerry Evans	Taylorsville.
Oats	John Stark	Taylorsville.
Wheat	John Stark	Taylorsville.
Burbank seedling potatoes	W. P. Hall	Susanville.
Yellow Globe onions	J. G. Maxwell	Quincy.
Early Puritan potatoes	J. W. Thompson	Quincy.
Polaris potatoes	J. W. Thompson	Quincy.
Centennial potatoes	Frank Chandler	Quincy.
Golden Tankard beet	J. H. Yeates	Quincy.
Celery, two varieties	J. W. Thompson	Quincy.
Hops	James Clinch	Quincy.
Sweet peas	L. G. Chatfield	Quincy.
White Mayflower potatoes	E. D. Hosselkus	Genesee.
Dakota red potatoes	Geo. Donnenworth	Taylorsville.
Wheat in head	D. R. Finlayson	Quincy.
CLASSES VII AND VIII.		
Shingles	J. C. Knickrem	Mohawk
Collection of old coins	Thos. Jackson	Prattville.
Fancy table	Mrs. C. J. Lee	Quincy.
Specimens of turning	Wm. Kinsey	Quincy.
Display of eggs	Mrs. J. H. Larison	Quincy.
Home-made wine	J. W. Thompson	Quincy.
Scroll work	Geo. Fletcher	Quincy.
Soda water	McKenzie Bros.	Greenville.
Display of hardware, etc.	H. G. Dorsch	Quincy.
Display of stoves	H. G. Dorsch	Quincy.
Display of tinware	H. G. Dorsch	Quincy.
Churn	Wm. Kinsey	Quincy.
Display of horseshoes	Wilson & Son	Quincy.
Lager beer	Wm. Schlatter	Quincy.
Display of gold ores	Richard Thompson	Spanish Ranch
Pair of boots	Geo. Kohn	Quincy.

SPEED PROGRAMME.

MONDAY, SEPTEMBER 22, 1890.

RACE No. 1—TROTTING.

District. Purse, three hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Dom Pedro; dam, Nettie Lambert	M. Biggs, Jr.	Oroville.
by Victor; dam, Lucy	J. S. Carter	Crescent.
by Anteo.	W. H. Blanchard	Reno.
Wilkes, by Alcantara, Jr.; dam, by		
Almont; dam, Lucy Ford	J. D. Byers	Janesville.
by Pasha; dam, Fawn	Thos. Raymond	Susanville.
	L. Levy	Sierraville.

SUMMARY.

Time—2:45; 2:47½; 2:46¾.	1
	2

RACE No. 2—TROTTING.

Purse, three hundred dollars. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Engineer; dam, Lunette	W. H. Killeby	Greenville.
by Engineer; dam, Queen	Bransford & McClelland	Greenville.
by Victor; dam, by Plumas	S. Kingdom	Crescent.
by Victor; dam, Mag. by Plumas	Dick Carter	Crescent.
by Alex Button; dam, Nell H	W. M. Thoms	Quincy.

SUMMARY.

Time—1:49; 1:47; 1:47½.	1
	2
	3

RACE No. 3—RUNNING.

For three-year olds owned in the district. Twenty-five dollars entrance; two dollars added. Three fourths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
S M R, pedigree unknown	S. M. Roberts	
Collingswood, by Cousin Vic; dam, by Lodi	Joe Dyson	
Joe D, by Cousin Vic; dam, by Lodi	Joe Dyson	
Longfellow, by Ranger; dam, Nettie	J. O. Hemler	
Maud, by Ranger; dam, Belmont mare	J. O. Hemler	
Hermes, by Bolinger	J. R. Knox	
Special, by Keystone	C. D. Boyden	
Tornado, by Vic; dam, by Blackbird	Tony Henderson	

SUMMARY.

Collingswood	1
Hermes	1
Joe D.	1

Time—1:25.

RACE No. 4—RUNNING.

District. Purse, two hundred dollars. One fourth of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Cricket, by Red Cloud; dam, Nellie	H. Lee	
Billy Maguire, pedigree unknown	William Flarity	
Red Rock, pedigree unknown	Stephens & Cole	
Coleman, by Pill Box; dam, unknown	Will Morton	
Clifton Belle, pedigree unknown	J. C. Moore	
Wizard, by Keystone; dam, unknown	C. D. Boyden	

SUMMARY.

Red Rock	1
Wizard	1
Billy Maguire	1

Time—0:24; 0:23½; 0:23½.

TUESDAY, SEPTEMBER 23, 1890.

RACE No. 5—TROTTING.

2:30 Class. Free for all. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Nevada, by Bourbon; dam, by Alex Barnes	H. E. Lewis	
Ed Biggs, by Brigadier; dam, thoroughbred	M. Biggs, Jr.	
Dude, by Robbie Gold Dust; dam, by Chieftain	A. J. Walsh	
Sinclair, pedigree unknown	C. H. Burt	

SUMMARY.

Nevada	1
Ed Biggs	2
Dude	0

Time—2:29½; 2:35; 2:40½.

RACE No. 6—PACING.

Purse, three hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Boy, by Dave Atherton; dam, by	J. O. Hemler	Janesville.
by Tinner; dam, Nelson Maid	G. R. Flournoy	Alturas.
by Manettie; dam, by Black Ralph	George La Point	Adin.

SUMMARY.

Boy	1
Manettie	2
Black Ralph	3

Time—3:02; 3:02½; 3:08.

RACE No. 7—RUNNING.

Purse, two hundred dollars. Three fourths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
wood, by Cousin Vic; dam, by Lodi	Joe Dyson	Summit.
pedigree unknown	Stephens & Cole	Quincy.
by Ranger; dam, Belmont mare	J. O. Hemler	Janesville.
by Pill Box; dam, unknown	W. Morton	Janesville.
Andy, by Keystone; dam, by Gladi	S. S. Ford	Alturas.

SUMMARY.

Rock	1
Andy	2
Man	3
Collingswood	0

Time—1:20.

RACE No. 8—RUNNING.

Purse, two hundred and fifty dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Compromise; dam, Frankie	A. Phillips	Ione.
by Leinster; dam, Lily Simpson	Laz. Levy	Sierraville.
by Ballot Box; dam, Lucy	S. M. Roberts	Milford.
by Cousin Vic; dam, by Lodi	Joe Dyson	Summit.
by Bolinger; dam, unknown	J. Stephan	Quincy.
by Three Cheers; dam, Atlanta	J. Forkner	Janesville.
by Hooker; dam, by Hermes	J. E. King	Woodland.

SUMMARY.

Douglas	1
Dan	2
Box	3
Manly	0

Time—1:48½.

WEDNESDAY, SEPTEMBER 24, 1890.

RACE No. 10—TROTTING.

2:34 Class. Free for all. Purse, four hundred dollars. Mile heats, best three in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Nevada, by Bourbon; dam, by Alex Barnes.	H. E. Lewis	Summit.
Ed Biggs, by Brigadier; dam, thoroughbred.	M. Biggs, Jr.	Quincy.
Dude, by Robbie Gold Dust; dam, by Chieftain.	A. J. Walsh	Moore's Station.

SUMMARY.

Nevada	1 1 1
Ed Biggs	2 2 2

Time—2:33; 2:33½; 2:36½.

RACE No. 11—TROTTING.

For two-year olds owned in the district. Purse, three hundred and fifty dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Milford B, by Engineer; dam, Lunette	Bransford & McClellan	Summit.
Lucy, by Victor; dam, Lucy	J. S. Carter	Quincy.
A C D, by Geo. Whapple; dam, unknown.	J. R. Knox	Moore's Station.
Maud Mc, by Engineer; dam, Queen	D. McIntyre	Susanville.

SUMMARY.

Milford B	1
Lucy	2
Maud Mc	3

Time—3:18; 3:12.

RACE No. 12—TROTTING.

2:50 Class. District. Purse, three hundred dollars. Mile heats, best three in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Prospect, by Pasha; dam, Fawn	L. Levy	Sierraville.
Viola, by Dom Pedro; dam, Nettie Lambert	M. Biggs, Jr.	Loyalton.
J C, by Victor; dam, Lucy	J. S. Carter	Crescent Mills.
Anteo, Jr., by Anteo; dam, thoroughbred	W. H. Blanchard	Davisville.
Duster, by Almont; dam, by Langford	J. D. Byers	

SUMMARY.

Viola	1
Anteo, Jr.	2
Prospect	3

Time—2:40½; 2:47; 2:48.

RACE No. 13—RUNNING.

Purse, two hundred and fifty dollars. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Bob Wooley; dam, Miss Stoneman	Dixon & Dunlap	Carson.
Wood, by Cousin Vic; dam, by Lodi	Joe Dyson	Summit.
pedigree unknown	Stephens & Cole	Quincy.
by Norfolk; dam, Dutch Girl	W. T. Gates	Moore's Station.
by Pill Box; dam, unknown	W. Morton	Janesville.
by Keystone; dam, unknown	C. D. Boyden	Alturas.
by Keystone; dam, by Judge Shear	S. S. Ford	Alturas.

SUMMARY.

Bob Wooley	1
Wood	2
pedigree unknown	3

Time—0:50½; 0:51; 0:50.

RACE No. 14—RUNNING.

Purse, four hundred dollars. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Ballot Box; dam, Lucy	S. M. Roberts	Milford.
by Cousin Vic; dam, by Lodi	Joe Dyson	Summit.
by Bolinger; dam, unknown	J. Stephan	Quincy.
by Norfolk; dam, Sister to Lottery	G. H. Simpson	Moore's Station.
by Three Cheers; dam, by Verdi	W. D. Minckler	Susanville.
by Andy, by Keystone; dam, by Gladi	S. S. Ford	Alturas.

SUMMARY.

Ballot Box	1
Cousin Vic	2
by Bolinger	3

Time—1:49; 1:50½; 1:52.

THURSDAY, SEPTEMBER 25, 1890.

RACE No. 15—TROTTING.

Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Hayward, by Poscora Hayward	L. Levy	Sierraville.
by Bourbon; dam, by Alex Barnes	H. E. Lewis	Loyalton.
Echo; dam, by Woodburn	G. A. Doherty	Crescent Mills.
pedigree unknown	C. H. Burt	Davisville.

SUMMARY.

Hayward	1
Bourbon	2
Echo	3

Time—2:36½; 2:34½; 2:35.

RACE No. 16—TROTTING.

For three-year olds and under owned in the district. Purse, three hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Milford B, by Engineer; dam, Lunette.....	Bransford & McClelland.....	Green
Thurman, by Victor; dam, Lucy.....	J. S. Carter.....	Green
Alcantara Wilkes, by Alcantara, Jr.; dam, by Gray Buck.....	Thos. Raymond.....	Green
Maud Mc, by Engineer; dam, Queen.....	D. McIntyre.....	Green

SUMMARY.

Milford B.....
Alcantara Wilkes.....
Thurman.....
Time—3:10; 3:07½; 3:12.

RACE No. 17—RUNNING.

Free for all. Purse, two hundred and fifty dollars. Seven eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lucky Dan, by Compromise; dam, Frankie Devine.....	A. Phillips.....	Green
Mohawk, by Norfolk; dam, Irene Harding.....	L. Levy.....	Green
Collingswood, by Cousin Vic; dam, by Lodi.....	Joe Dyson.....	Green
Maud, by Ranger; dam, Belmont mare.....	J. O. Hernier.....	Green
Mollie McShane, by Pill Box; dam, unknown.....	H. L. Cain.....	Green
Joker, by Joe Hooker; dam, by Hermes.....	J. E. King.....	Green

SUMMARY.

Mohawk.....
Lucky Dan.....
Time—1:36½.

RACE No. 18—RUNNING.

District. Purse, two hundred dollars. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rock, by Bob Wooley; dam, Miss Stoneman.....	Dixon & Dunlap.....	Green
Billy McGuire, pedigree unknown.....	Wm. Flarity.....	Green
Joe D, by Cousin Vic; dam, by Lodi.....	Joe Dyson.....	Green
Red Rock, pedigree unknown.....	Stephens & Cole.....	Green
Blackstone, by Keystone; dam, by Judge Shear.....	S. S. Ford.....	Green
Hermes, by Bolinger; dam, by Judge Shear.....	J. R. Knox.....	Green
Pinto, by Top Gallant; dam, by Judge Shear.....	P. R. Welsh.....	Green
Coleman, by Pill Box; dam, by Judge Shear.....	Wm. Morton.....	Green
Gold Dust, by Simon Gurty; dam, Dutch Girl.....	J. C. Moore.....	Green
Wizard, by Keystone; dam, unknown.....	C. D. Boyden.....	Green

SUMMARY.

Rock.....1
Billy McGuire.....2
Joe D.....3
Red Rock.....0
Blackstone.....0
Gold Dust.....0
Pinto.....0
Time—0:50.

RACE No. 19—RUNNING.

Purse, two hundred and fifty dollars. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Thur, by Ballot Box; dam, Lucy.....	S. M. Roberts.....	Milford.
by Cousin Vic; dam, by Lodi.....	Joe Dyson.....	Summit.
by Three Cheers; dam, Atlanta.....	Jake Forkner.....	Janesville.
Andy, by Keystone; dam, by Gladi.....	S. S. Ford.....	Alturas.

SUMMARY.

Ballot Box.....1
Thur.....2
Time—2:19½.

FRIDAY, SEPTEMBER 26, 1890.

RACE No. 20—TROTTING.

District. Purse, three hundred and fifty dollars. Mile heats, best three

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Brigadier; dam, thoroughbred.....	M. Biggs, Jr.....	Oroville.
by Almont; dam, by Langford.....	J. D. Byers.....	Janesville.
by Sierra Boy; dam, Kitty McGuire.....	D. Newman.....	Sierra Valley.

SPECIAL TROTTING.

Purse, two hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Sierra Boy; dam, Kitty McGuire.....	D. Newman.....	Sierra Valley.
by Brigadier; dam, thoroughbred.....	M. Biggs, Jr.....	Oroville.
by Hayward, by Poscora Hayward; dam,.....	L. Levy.....	Sierraville.

SUMMARY.

Hayward.....1
by L.....2
by.....3
Time—2:41; 2:48; 2:32½; 2:38½.

RACE No. 21—PACING.

Free for all. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mountain Boy, by Dave Atherton; dam, by Whipman	J. O. Hemler	Janesville
Flournoy, by Tinner; dam, Nelson Maid	G. R. Flournoy	Janesville
Jessie L, by Mattie; dam, by Black Ralph	Geo. La Point	Janesville

SUMMARY.

Flournoy	1
Mountain Boy	1
Time—2:58; 2:51; 2:50; 2:50; 2:55.	

RACE No. 22—RUNNING.

District. Purse, two hundred dollars. Three eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Cricket, by Red Cloud; dam, Nellie	H. Lee	Janesville
Collingswood, by Cousin Vic; dam, by Lodi	Joe Dyson	Janesville
Red Rock, pedigree unknown	Stephens & Cole	Janesville
Coleman, by Pill Box; dam, unknown	Wm. Morton	Janesville
Clifton Belle, pedigree unknown	J. C. Moore	Janesville
Wizard, by Keystone; dam, unknown	C. D. Boyden	Janesville

SUMMARY.

Wizard	1
Red Rock	1
Cricket	1
Collingswood	1
Time—0:36½.	

RACE No. 23—RUNNING.

Free for all. Purse, three hundred and fifty dollars. One and three eighths mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lucky Dan, by Compromise; dam, Frankie Devine	A. Phillips	Janesville
Dave Douglas, by Leinster; dam, Lily Simpson	L. Levy	Janesville
Snuff Box, by Ballot Box; dam, Lucy	S. M. Roberts	Janesville
Ottawa, by Cousin Vic; dam, by Lodi	Joe Dyson	Janesville
Barham, by Norfolk; dam, Sister to Lottery	Geo. H. Simpson	Janesville
Joaquin, by Three Cheers; dam, by Verdi	W. D. Minckler	Janesville
Joker, by Joe Hooker; dam, by Hermes	J. E. King	Janesville

SUMMARY.

Dave Douglas	1
Snuff Box	1
Lucky Dan	1
Time—2:30.	

RACE No. 24—RUNNING.

Two-year olds. Twenty-five dollars entrance; one hundred and fifty dollars one half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
pedigree unknown	S. M. Roberts	Milford.
Cousin Vic; dam, by Lodi	Joe Dyson	Summit.
Cousin Vic; dam, by Snuff Box	Joe Dyson	Summit.
by Ranger; dam, Nellie	J. O. Hemler	Janesville.
by Keystone; dam, unknown	C. D. Boyden	Alturas.
by Cousin Vic; dam, by Blackbird	Tony Henderson	Sierra Valley.

SUMMARY.

Joe D.	1
Joe B.	2
Langfellow	3
Time—0:55.	

SATURDAY, SEPTEMBER 27, 1890.

RACE No. 25—TROTTING.

Class. District. Purse, three hundred and fifty dollars. Mile heats, best three

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Brigadier; dam, thoroughbred	M. Biggs, Jr.	Oroville.
by Sierra Boy; dam, Kitty McGuire	D. Newman	Sierra Valley.
by Almont; dam, by Langford	J. D. Byers	Janesville.

SUMMARY.

Robert L.	1
M. Biggs	2
Time—2:43; 2:44; 2:37½; 2:42; 2:40.	

RACE No. 26—TROTTING.

Two-year olds and under owned in the district. Purse, three hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Pasha; dam, Fawn	L. Levy	Sierraville.
by Adonis; dam, by Ethan Allen	M. Biggs, Jr.	Oroville.
by Adonis; dam, Lucy	J. S. Carter	Crescent.
by Wilkes, by Alcantara, Jr.; dam, by	Thos. Raymond	Susanville.
pedigree unknown	J. Knox	Quincy.

SUMMARY.

Adonis	1
Adonis	2
Adonis Wilkes	3
Time—3:00; 3:10½; 3:08½.	

RACE No. 27—RUNNING.

District. Purse, two hundred and fifty dollars. Three fourths of a mile and

Name and Pedigree of Horse.	By Whom Entered.	Adm.
Ottawa, by Cousin Vic; dam, by Lodi.....	Joe Dyson.....	
Maud, by Ranger; dam, Belmont mare.....	J. O. Hemler.....	
Bay Billy, by Bolinger; dam, unknown.....	J. Stephan.....	
Jack Dempsey, by Three Cheers; dam, Atlanta.	J. Forkner.....	
Snapping Andy, by Keystone; dam, by Gladi- ator.....	S. S. Ford.....	

SUMMARY.

Ottawa.....1
 Snapping Andy.....2

Time—1:21; 1:21.

RACE No. 28—RUNNING.

Free for all. Purse, two hundred dollars. Five eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Adm.
Lucky Dan, by Compromise; dam, Frankie Devine.....	A. Phillips.....	
Mohawk, by Norfolk; dam, Irene Harding.....	L. Levy.....	
Collingswood, by Cousin Vic; dam, by Lodi.....	Joe Dyson.....	
Red Rock, pedigree unknown.....	Stephens & Cole.....	
Minnie Bryden, by Norfolk; dam, Dutch Girl.....	W. F. Gates.....	
Coleman, by Pill Box; dam, unknown.....	W. Morton.....	
Mollie McShane, by Pill Box; dam, unknown.....	H. L. Cain.....	
Gold Dust, by Simon Gurty; dam, Dutch Girl.....	J. C. Moore.....	
Joker, by Joe Hooker; dam, by Hermes.....	J. E. King.....	

SUMMARY.

Red Rock.....
 Mohawk.....
 Lucky Dan.....
 Collingswood.....

Time—1:05.

TRANSACTIONS

OF THE

ELEVENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Lake and Mendocino.

OFFICERS OF THE ASSOCIATION.

L. G. SIMMONS
A. B. McCUTCHEN
MARSHALL ARNOLD.....

DIRECTORS.

L. G. SIMMONS.....
MAURICE KEATINGE.....
DAVID ALEXANDER.....
C. W. ABY.....
W. J. HILDRETH.....
JOHN MEWHINNEY.....
J. M. MANNON.....

REPORT.

LAKEPORT, November 14, 1890.

Honorable the State Board of Agriculture:

MEMORANDUM: The Directors of the Twelfth District Agricultural Association submit this, their report of the transactions of said association, for the year ending this date.

A. B. McCUTCHEN,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

Sept. 13—By amount collected—Premium list advertisements	\$44 50
23—By membership tickets	275 00
22—By entrance fee—Hiram Willits	10 00
L. C. Starr	30 00
G. L. Hildebrand	30 00
W. A. Hagans	30 00
Thomas Charlton	30 00
Charles Piner	30 00
L. W. Redwine	10 00
23—By hack license—Burger & Bacon	10 00
John Connor	10 00
Albert Adams	10 00
M. F. Jackson	10 00
By entrance fee—Harris & Knapp	30 00
D. C. McDougal	10 00
W. B. Sanborn	40 00
By day and season tickets	106 50
By receipts from Pavilion	10 00
24—By entrance fee—L. W. Redwine	10 00
W. B. Sanborn	10 00
Thomas Charlton	10 00
W. B. Sanborn	10 00
James O'Farrel	10 00
D. C. Macdougall	10 00
By day and season tickets	130 00
By candy-stand privilege	20 00
By entrance fee—B. E. Harris	15 00
By receipts at Pavilion	27 00
25—By entrance fee—G. L. Hildebrand	30 00
P. E. Smith	10 00
Frank Bradford	10 00
Thomas Charlton	10 00
C. B. Moore	10 00
James O'Farrel	10 00
Hiram Willits	10 00
By day and season tickets	154 00
By receipts at Pavilion	115 00
26—By entrance fee—W. B. Sanborn	10 00
L. W. Redwine	10 00
James O'Farrel	10 00
P. E. Smith	10 00
By day and season tickets	201 00
By receipts at Pavilion	67 75
27—By entrance fee—James O'Farrel	6 00
J. P. Davis	6 00
E. W. Rose	6 00
James Burger	6 00
Frank Bradford	101 00
By day and season tickets	27 00
By pool percentage	33 00
By bar percentage	33 00
By receipts at Pavilion	12 00
29—By net receipts from ball	120 00
Oct. 14—By amount of lumber sold to A. B. Rodman	110 00
Sept. 27—By amount of warrants paid out of receipts	2,500 00
By amount due from State	

Expenditures.

For premiums	\$1,500 00
For purses	1,000 00
For rent of fair grounds	175 00
For music	120 00
For advertising—"Breeder and Sportsman"	40 00
"Spirit of the Times"	30 00
"Ukiah Republican"	30 00
"Ukiah Dispatch"	15 00
"Lakeport Avalanche"	15 00
"Lower Lake Bulletin"	15 00
"Kelseyville Era"	15 00
For salary of Secretary	1,000 00
For labor, hay, material, etc.	

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
THOROUGHBREDS—STALLIONS.			
four years old and over	Lily Langtry	Middletown	1st prem.
four years old and over	G. Scudamore	Lakeport	2d prem.
MARES.			
four years old	J. W. Boggs	Lakeport	1st prem.
STANDARD TROTTERS—STALLIONS.			
four years old and over	G. L. Hildebrand	Kelseyville	1st prem.
four years old and over	A. B. Rodman	Lakeport	2d prem.
two years old	M. Starr	Lakeport	1st prem.
two years old	E. R. Armington	Lakeport	2d prem.
MARES.			
four years old and over	M. Starr	Lakeport	1st prem.
four years old and over	E. R. Armington	Lakeport	2d prem.
two years old	G. L. Hildebrand	Kelseyville	1st prem.
two years old	E. R. Armington	Lakeport	1st prem.
one year old	A. B. Rodman	Lakeport	2d prem.
one year	G. L. Hildebrand	Kelseyville	1st prem.
FAMILIES.			
three, with not less than three	A. B. Rodman	Lakeport	1st prem.
two, with not less than two	E. R. Armington	Lakeport	1st prem.
BLOODSTOCKS AND PERCHERONS—STALLIONS.			
four years old and over	W. B. Collier	Lakeport	1st prem.
MARES.			
four years old and over	W. B. Collier	Lakeport	1st prem.
four years old and over	W. B. Collier	Lakeport	2d prem.
FAMILIES.			
three	W. B. Collier	Lakeport	1st prem.
ROADSTERS—STALLIONS.			
four year old and over	J. W. Boggs	Lakeport	1st prem.
four years old and over	W. A. Hagans	Ukiah	2d prem.
four years old	W. A. Hagans	Ukiah	1st prem.
three years old	S. G. Hilyer	Kelseyville	2d prem.
three years old	J. W. Boggs	Lakeport	1st prem.
three years old	P. E. Smith	Lakeport	2d prem.
three years old	J. W. Boggs	Lakeport	1st prem.
three years old	A. B. Rodman	Lakeport	1st prem.
MARES.			
four years old and over	J. W. Boggs	Lakeport	1st prem.
four years old and over	A. B. Rodman	Lakeport	2d prem.
three years old	P. E. Smith	Lakeport	1st prem.
three years old	J. J. Manlove	Lakeport	1st prem.
ROADSTER TEAMS.			
four years old and over	Lee Simmons	Lakeport	1st prem.
four years old and over	J. J. Manlove	Lakeport	2d prem.
four years old	N. Graham	Upper Lake	3d prem.

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS X—HORSES OF ALL WORK—STALLIONS.		
Prince, four years old and over.....	Daniel McLain.....	Upper Lake.....
Clay, one year old.....	F. M. Burroughs.....	Upper Lake.....
MARES.		
Pearl, four years old and over.....	G. W. Christie.....	Lakeport.....
Nettie, four years old and over.....	G. Scudamore.....	Lakeport.....
Lucy, three years old.....	J. M. Wooldridge.....	Lakeport.....
—, under one year.....	G. Scudamore.....	Lakeport.....
CLASS XI—CARRIAGE HORSES.		
Carriage team.....	J. M. Wooldridge.....	Lakeport.....
Carriage team.....	A. B. Rodman.....	Lakeport.....
Carriage team.....	E. C. Woodruff.....	Upper Lake.....
Carriage team.....	W. N. Thompson.....	Lakeport.....
CLASS XII—DRAFT HORSES—STALLIONS.		
—, two years old.....	F. M. Burroughs.....	Upper Lake.....
—, one year old.....	F. M. Burroughs.....	Upper Lake.....
MARES.		
Myrtle, two years old.....	H. Feen.....	Lakeport.....
Daisy, two years old.....	H. Feen.....	Lakeport.....
CLASS XIII—SADDLE HORSES.		
Frank.....	J. H. Renfro, Jr.....	Kelseyville.....
Nig.....	Floyd Boggs.....	Lakeport.....
Manda.....	G. W. Christie.....	Lakeport.....
CLASS XIV—JACKS AND JENNIES.		
Zeno, jack.....	James A. Poague.....	Upper Lake.....
Beecher, jack.....	Hiram Wilkinson.....	Lakeport.....
Coloma, jenny.....	J. C. Hess.....	Kelseyville.....
CLASS XV—MULES.		
Dick and Tony.....	L. H. Boggs.....	Lakeport.....
Jennie and Jule.....	J. H. Rowden.....	Kelseyville.....

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—DURHAMS—BULLS.		
—, two years old.....	W. N. Thompson.....	Lakeport.....
CLASS II—JERSEYS AND GUERNSEYS—BULLS.		
—, one year old.....	G. L. Hildebrand.....	Kelseyville.....
COWS.		
—, three years old.....	G. L. Hildebrand.....	Kelseyville.....
—, two years old.....	G. L. Hildebrand.....	Kelseyville.....
CLASS VI—HOLSTEINS—COWS.		
Star, two years old.....	G. W. Christie.....	Lakeport.....
CLASS VIII—GRADED CATTLE.		
—, two years old.....	J. J. Manlove.....	Lakeport.....
—, calf.....	W. A. Christie.....	Lakeport.....

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS XIV—BRONZE TURKEYS.	W. H. Manlove.....	Lakeport.....	1st prem.

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
GRAIN, FLOWERS, BREAD, AND GARDEN SEEDS.			
potatoes.....	Joseph Mendenhall.....	Upper Lake.....	\$5 00
beans.....	Joseph Mendenhall.....	Upper Lake.....	\$3 00
biscuit.....	Mrs. S. Bruton.....	Lakeport.....	\$1 00
bread.....	R. E. Hardy.....	Lakeport.....	\$3 00
pot of flowers.....	R. E. Hardy.....	Lakeport.....	\$3 00
cut flowers.....	Mrs. W. E. Hixon.....	Lakeport.....	\$8 00
perennial grasses.....	Mrs. W. E. Hixon.....	Lakeport.....	\$6 00
pot of flowers.....	Mrs. W. E. Hixon.....	Lakeport.....	\$3 00
bread.....	Mrs. Geo. A. Lyon.....	Lakeport.....	\$10 00
white corn.....	Mrs. Geo. A. Lyon.....	Lakeport.....	\$2 00
yellow corn.....	Thomas Porteus.....	Big Valley.....	\$2 50
stalks corn.....	Thomas Porteus.....	Big Valley.....	\$2 50
Irish potatoes.....	Thomas Porteus.....	Big Valley.....	\$2 50
wheat.....	C. W. Jones.....	Lakeport.....	\$5 00
wheat.....	R. D. Merritt.....	Kelseyville.....	\$2 50
Club wheat.....	R. D. Merritt.....	Kelseyville.....	\$2 50
beans.....	R. D. Merritt.....	Kelseyville.....	\$2 50
garden seeds.....	A. J. Everett.....	Lakeport.....	\$10 00
barley.....	A. J. Everett.....	Lakeport.....	\$3 00
potatoes.....	A. J. Everett.....	Lakeport.....	\$2 50
Irish potatoes.....	W. Cogswell.....	Lakeport.....	\$10 00
beans.....	W. Cogswell.....	Lakeport.....	\$3 00
beans.....	W. D. Rantz.....	Lakeport.....	\$5 00
beans.....	W. D. Rantz.....	Lakeport.....	\$3 00
beans.....	W. D. Rantz.....	Lakeport.....	\$3 00
beans.....	John Stephens.....	Lakeport.....	\$3 00
beans.....	R. P. Eachus.....	Lakeport.....	\$3 00
beans.....	R. P. Eachus.....	Lakeport.....	\$7 50
beans.....	R. P. Eachus.....	Lakeport.....	\$3 00
beans.....	Mrs. E. P. Wray.....	Lakeport.....	\$8 00
beans.....	Mrs. E. P. Wray.....	Lakeport.....	\$2 50
beans.....	G. Scudamore.....	Lakeport.....	\$2 50
beans.....	G. Scudamore.....	Lakeport.....	\$2 50
beans.....	Miss Birdie Welty.....	Lakeport.....	\$2 00
beans.....	Miss Myra Howard.....	Lakeport.....	\$2 00
beans.....	E. P. Wray.....	Lakeport.....	\$2 50
beans.....	Frank Gunn.....	Kelseyville.....	\$3 00
beans.....	Mrs. J. W. Mackall.....	Lakeport.....	\$5 00

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
FRUITS.			
apples.....	S. D. Potter.....	Kelseyville.....	\$2 50
peaches.....	Joseph Mendenhall.....	Upper Lake.....	\$3 00
peaches.....	Joseph Mendenhall.....	Upper Lake.....	\$5 00
peaches.....	Joseph Mendenhall.....	Upper Lake.....	\$10 00
peaches.....	Joseph Mendenhall.....	Upper Lake.....	\$5 00

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Second best jams and jellies	Mrs. S. Bruton	Lakeport
Second best pickles	Mrs. S. Bruton	Lakeport
Third best apples	Peter Hugeland	Lakeport
Third best table grapes	G. W. Minstrell	Lakeport
Third best fruits in glass	Mrs. T. F. Bingham	Lakeport
Best dried peaches	Mrs. T. F. Bingham	Lakeport
Best dried nectarines	Mrs. T. F. Bingham	Lakeport
Fifth best display of plums	Mrs. T. F. Bingham	Lakeport
Third best display of prunes	Mrs. T. F. Bingham	Lakeport
Fourth best jams and jellies	Mrs. W. E. Hixon	Lakeport
Best dried prunes	W. D. Akers	Kelseyville
Fourth best apples	Thos. Porteus	Big Valley
Best pears	Thos. Porteus	Big Valley
Best pears, single variety	Thos. Porteus	Big Valley
Best figs	F. W. Gibson	Lakeport
Third best peaches	Mrs. John Byrnes	Lakeport
Best prunes	A. J. Everett	Lakeport
Best display and variety of prunes	A. J. Everett	Lakeport
Best plums	A. J. Everett	Lakeport
Best nectarines	A. J. Everett	Lakeport
Fifth best apples	Henry Dorr	Lakeport
Fourth best pears	Henry Dorr	Lakeport
Best peaches	Henry Dorr	Lakeport
Second best plums	Henry Dorr	Lakeport
Best fruit in glass	Mrs. H. C. Wilkinson	Lakeport
Best jams and jellies	Mrs. H. C. Wilkinson	Lakeport
Best exhibit in Pavilion	Mrs. H. C. Wilkinson	Lakeport
Largest bunch of grapes	J. T. Dysard	Lakeport
Fourth best table grapes	J. T. Dysard	Lakeport
Fifth best peaches	L. P. Berger	Lakeport
Best plums	L. P. Berger	Lakeport
Best figs	L. P. Berger	Lakeport
Best dried plums	L. P. Berger	Lakeport
Best dried apricots	L. P. Berger	Lakeport
Best nuts	L. P. Berger	Lakeport
Second best table grapes	L. P. Berger	Lakeport
Best wine grapes	L. P. Berger	Lakeport
Best exhibit and variety of wine grapes	L. P. Berger	Lakeport
Best dried figs	L. P. Berger	Lakeport
Best dried pears	L. P. Berger	Lakeport
Second best wine grapes	J. C. Mottier	Middletown
Fourth best plums	R. P. Eachus	Lakeport
Best apples	E. P. Wray	Lakeport
Best display and variety of apples	E. P. Wray	Lakeport
Fifth best pears	E. P. Wray	Lakeport
Best quinces	E. P. Wray	Lakeport
Best display and variety of quinces	E. P. Wray	Lakeport
Third best jams and jellies	Mrs. E. P. Wray	Lakeport
Best pickles	Mrs. E. P. Wray	Lakeport
Fifth best single variety of peaches	Mack Matthews	Lakeport
Third best pears	C. W. Reed	Lakeport
Best honey	C. W. Jones	Lakeport
Second best apples	G. Scudamore	Lakeport
Second best pears	G. Scudamore	Lakeport
Best plums	G. Scudamore	Lakeport
Third best plums	G. Scudamore	Lakeport
Second best quinces	G. Scudamore	Lakeport
Second best fruits in glass	Mrs. G. Scudamore	Lakeport
Best evaporated apples	Clendenin Bros.	Kelseyville

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
MECHANICAL WORK.			
Wagon harness	J. T. Edmunds	Lakeport	\$5 00
Wagon harness	J. T. Edmunds	Lakeport	\$3 00
Wagon rug	Mrs. R. T. McCluney	Lakeport	\$2 00
Wagon and shoes	D. C. Branch	Lakeport	\$5 00

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
WINES.			
Model wine	L. P. Berger	Lakeport	Diploma.
Model wine	S. C. Hastings	Carsonia	Diploma.
Model wine	J. C. Mottier	Middletown	\$5 00

EIGHTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
SHELL, AND WAX WORK.			
Shelled wall panel	Miss D. L. Rowden	Kelseyville	\$2 00
Shelled wall panel	Mrs. M. Wooldridge	Lakeport	\$1 00
Shelled wall panel	Miss M. E. Lyman	Lakeport	\$2 50
Shelled wall panel	Miss M. E. Lyman	Lakeport	\$5 00
Shelled wall panel	Miss M. E. Lyman	Lakeport	\$10 00
Shelled wall panel	Miss Iby Gully	Lakeport	\$1 00
Shelled wall panel	Miss Iby Gully	Lakeport	\$2 00
Shelled wall panel	Miss Grace Wright	Lakeport	\$2 50
Shelled wall panel	Mrs. Emily Cole	Lakeport	\$2 00
Shelled wall panel	Mrs. W. E. Hixon	Lakeport	\$2 00
Shelled wall panel	Mrs. W. E. Hixon	Lakeport	\$2 50
Shelled wall panel	Miss Minnie Crump	Lakeport	\$2 50
Shelled wall panel	Miss Rosa Green	Lakeport	\$2 00
Shelled wall panel	Miss Mary Biggi	Lakeport	\$2 00
Shelled wall panel	Miss Mary Biggi	Lakeport	\$2 50
Shelled wall panel	Miss M. Dickenson	Lakeport	\$2 00
Shelled wall panel	Mrs. W. B. Collier	Lakeport	\$2 50
Shelled wall panel	Mrs. W. B. Collier	Lakeport	\$2 50
Shelled wall panel	Mrs. W. B. Collier	Lakeport	\$2 00
Shelled wall panel	Mrs. P. Christenson	Lakeport	\$2 50
Shelled wall panel	Mrs. Chester White	Lakeport	\$2 00
Shelled wall panel	Mrs. J. W. Mackall	Lakeport	\$2 50
Shelled wall panel	Mrs. J. W. Mackall	Lakeport	\$2 00
Shelled wall panel	Mrs. J. W. Mackall	Lakeport	\$2 00
Shelled wall panel	Mrs. Belle Lee	Lakeport	\$2 00
Shelled wall panel	Mrs. Belle Lee	Lakeport	\$2 00
Shelled wall panel	George Sanford	Lakeport	\$3 00
Shelled wall panel	Mrs. H. A. McCraney	Lakeport	\$2 50
Shelled wall panel	Mrs. H. A. McCraney	Lakeport	\$2 50
Shelled wall panel	Mrs. H. A. McCraney	Lakeport	\$2 50
Shelled wall panel	Mrs. Mary Miller	Lakeport	\$2 00
Shelled wall panel	Mrs. M. McCawley	Lakeport	\$2 00
Shelled wall panel	Mrs. M. Spencer	Lakeport	\$2 50
Shelled wall panel	Miss Lela White	Lakeport	\$2 00
Shelled wall panel	Mrs. J. D. Stephens	Lakeport	\$2 50
Shelled wall panel	Mrs. D. C. Lewis	Kelseyville	\$2 50
Shelled wall panel	Miss Lulu Hamilton	Kelseyville	\$2 00
Shelled wall panel	Miss Lulu Hamilton	Kelseyville	\$2 50
Shelled wall panel	Mrs. John Arnold	Lakeport	\$2 00

EIGHTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best preserved mosses	Mrs. John Arnold	Lakeport
Best kensington painting	Mrs. John Arnold	Lakeport
Best embroidered sofa pillow	Mrs. John Arnold	Lakeport
Best shell work	Mrs. John Arnold	Lakeport
Best general exhibit of fancy articles	Mrs. John Arnold	Lakeport
Best chenille embroidery	Mrs. John Arnold	Lakeport
Best sofa pillow	Mrs. Sam Allen	Lakeport
Best crochet skirt	Mrs. Sam Allen	Lakeport
Best embroidered toilet set	Mrs. David Williams	Lakeport
Best lady's dress	Miss M. E. Bradley	Lakeport
Best applique work	Miss M. E. Bradley	Lakeport
Best toilet set	Mrs. D. Bauer	Lakeport
Best water color painting	Mrs. R. J. Hudson	Lakeport
Best hearth rug	Mrs. Hunnewell	Lakeport
Best Spanish drawn work	Mrs. C. S. Piner	Kelseyville
Best darned net	Mrs. C. S. Piner	Kelseyville
Best kensington painting	Miss Josie Bruton	Lakeport
Best mosses and lichens	Mrs. M. Arnold	Lakeport
Third best display of paintings	Mrs. Maud Swayze	Lakeport
Second best display of paintings	Mrs. M. Keatinge	Lower Lake
Fourth best display of paintings	Mrs. M. Keatinge	Lower Lake
Best decorative painting	Mrs. M. Keatinge	Lower Lake
Best single oil painting	Miss Ada M. Fisher	Lakeport

TENTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
W. D. Rantz	Kelseyville		\$1 00
W. D. Rantz	Kelseyville		\$1 00
J. T. Dysard	Kelseyville		\$2 00
Miss M. E. Lyman	Kelseyville		\$2 50
Miss M. E. Lyman	Kelseyville		\$2 50
Mrs. J. M. Akers	Kelseyville		\$2 00
R. E. Hardy	Lakeport		\$1 00
R. E. Hardy	Lakeport		\$1 00
R. E. Hardy	Lakeport		\$1 00
Miss Carrie Slotter	Lakeport		\$2 50
George E. Moore	Lakeport		\$3 00
John Overholser	Lakeport		\$5 00
Henry Wambold	Blue Lakes		\$3 00
R. P. Eachus	Lakeport		\$1 00
A. D. Potter	Kelseyville		\$1 00
Mrs. E. H. Jenks	Lakeport		\$2 00
Isaac Alter	Lakeport		\$1 00
Miss Tillie Haynes	Upper Lake		\$1 00
John Stephens	Lakeport		\$1 00
E. P. Wray	Lakeport		\$1 00
Miss M. E. Bradley	Lakeport		\$3 00
Pete Boggs	Lakeport		\$1 00
Jas. H. Combs	Lakeport		\$1 00
Jas. H. Combs	Lakeport		\$3 00

NINTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
SCHOOL WORK.		
Best penmanship	Will Christie	Lakeport
Best bookkeeping	Miss Iby Gully	Lakeport
Best essay	Miss E. Alexander	Lakeport
Best map of Lake County	James Male	Lakeport

TENTH DEPARTMENT (MISCELLANEOUS).

Exhibit.	Exhibitor.	Address.
Painted table cover	Miss Lena Crump	Lakeport
Taxidermy	Rev. E. H. Jenks	Lakeport
Tarleton wreath	Mrs. A. H. Spurr	Lakeport
Wreath of paper flowers	Miss Grace Wright	Lakeport
Baby dress	Mrs. M. L. Rowden	Lakeport
Hair wreath	Mrs. Geo. Boardman	Lakeport
Silk plaque	Mrs. C. D. Meade	Lakeport
Pen portrait	Page B. Collier	Lakeport
Painted fire screen	Mrs. Chester White	Lakeport
Painted fire screen	Mrs. J. W. Mackall	Lakeport
Hair wreath	Mrs. J. W. Mackall	Lakeport
Cut wool pincushion	Mrs. J. W. Mackall	Lakeport
Cut wool pincushion	Mrs. Annie Parrish	Lakeport
Embroidered ottoman	Mrs. M. E. McCawley	Lakeport
Cross-stitch embroidery	Mrs. G. V. Stickle	Lakeport
Ottoman	Miss Lela White	Lakeport
Doll	Miss Annie Barry	Lakeport
Canned fruit	F. W. Gibson	Lakeport
Snowflake wheat	R. D. Merritt	Kelseyville
Display of table fruit	G. W. Minstrell	Lakeport
Paintings from nature	Miss Alice Merritt	Kelseyville
Peppers	Mrs. L. A. Young	Kelseyville
Painted screen	Mrs. John Arnold	Kelseyville

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 23, 1890.

RACE No. 2—RUNNING.

One hundred dollars added; twenty-five dollars to second horse. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Fox	James O'Farrel .....	.....
Jack the Ripper	Hiram Willits .....	.....
Joe Hooker	D. C. Macdougall .....	.....
Inkerman	W. B. Sanborn .....	.....

SUMMARY.

Fox	1
Inkerman	2
Joe Hooker	3
Jack the Ripper	4

Time—0:49.

RACE No. 3—TROTTING.

3:00 Class. One hundred and fifty dollars added; entrance, thirty dollars; best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lady Blanche	M. L. Reynolds .....	.....
Alwood	G. L. Hildebrand .....	.....
Warwick	Thos. Charlton .....	.....
Sam Tilden	Chas. Piner .....	.....
Jolly Boy	Geo. Shaner .....	.....
Nimrod	J. H. Lawrence .....	.....

SUMMARY.

Lady Blanche	1
Nimrod	2
Jolly Boy	3
Sam Tilden	4
Warwick	5
Alwood	6

Time—2:41½; 2:41½; 2:42.

WEDNESDAY, SEPTEMBER 24, 1890.

RACE No. 4—RUNNING.

One hundred and sixty dollars; twenty-five dollars to second. Half mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	S. Hornbrook .....	..... Covelo.
.....	D. C. Macdougall .....	..... Lakeport.
.....	W. B. Sanborn .....	..... Santa Rosa.

SUMMARY.

.....	1
.....	2
.....	3

Time—0:48½; 0:49½; 0:50½.

RACE No. 5—TROTTING.

Purse, two hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	Chas. S. Piner .....	..... Kelseyville.
.....	J. H. Lawrence .....	..... Santa Rosa.
.....	Geo. Ellis .....	..... Lakeport.
.....	Seth Rickabaugh .....	..... Kelseyville.

SUMMARY.

.....	1
.....	2

Time—2:38; 2:40; 2:39; 2:38; 2:39.

THURSDAY, SEPTEMBER 25, 1890.

RACE No. 7—RUNNING.

One hundred dollars; seventy-five dollars added. One quarter of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	P. E. Smith .....	..... Lakeport.
.....	Frank Bradford .....	..... Bradford Mine.
.....	James O'Farrel .....	..... Pomo.

SUMMARY.

.....	1
.....	2
.....	3

Time—0:23.

TRANSACTIONS

OF THE

FIFTEENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Yuba, Sutter, and Yolo.

REPORT.

MARYSVILLE, September 27, 1890.

OFFICERS OF THE ASSOCIATION.

W. T. ELLIS, JR.
G. R. ECKART
A. D. CUTTS

DIRECTORS.

W. T. ELLIS, JR.
G. W. HUTCHINS
GEORGE, W. WOODARD
M. MARCUSE
D. E. KNIGHT
C. A. GLIDDEN
A. D. CUTTS
C. N. THARSING

Honorable the State Board of Agriculture:

WE, the Directors of the Thirteenth District Agricultural Association, submit this, their report of the transactions of said association for the year ending this date.

G. R. ECKART,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

On hand.....	\$590 72
Assessments in premium list.....	53 00
Subscriptions.....	2,171 50
Admission at Park.....	1,166 90
Admission at Pavilion.....	755 95
Admission privilege.....	350 00
Admission privileges.....	60 00
Admission privileges.....	18 90
Admission premiums.....	477 92
Admission fees to races.....	2,645 00
Admission State.....	3,000 00
	<u>\$11,289 89</u>

Expenditures.

To National Trotting Association.....	\$50 00
For races.....	4,843 33
For rent, and music.....	537 30
For Pavilion and Park.....	163 00
For and supplies at Park.....	594 20
For and supplies at Pavilion.....	363 25
For road and track.....	214 95
For advertising.....	312 41
For Secretary.....	300 00
For incidental expenses.....	120 05
For premiums at Park and Pavilion.....	2,651 50
	<u>1,149 90</u>
	\$11,289 89

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBREDS—MARES.		
Maid	J. B. Ramsey	Meridian
Emma D	J. B. Ramsey	Meridian
Hazel	J. B. Ramsey	Meridian
CLASS II—GRADED HORSES—STALLIONS.		
Silver King and family	J. D. Forbes	Moore's Station
Boxwood	G. L. Jenkins	Marysville
Tom Shields	J. B. Ramsey	Meridian
Pointer	J. M. C. Jasper	Wheatland
Bullion	D. E. Knight	Marysville
MARES.		
Racket	J. B. Ramsey	Meridian
Bay mare	C. Gottwals	Yuba City
Belle	J. B. Ramsey	Meridian
CLASS III—HORSES OF ALL WORK—STALLIONS.		
Granger	S. Harding	Marysville
MARES.		
Lunette	J. Seaward	Wheatland
Puss	A. S. Wight	Honcut
Flora	J. B. Ramsey	Meridian
CLASS IV—DRAFT HORSES—STALLIONS.		
Napoleon and family	J. Seaward	Wheatland
Luneville	J. Seaward	Wheatland
Brilliant	J. Seaward	Wheatland
MARES.		
Magnolia	J. Seaward	Wheatland
Susie	Ed. McGowan	Marysville
Kate	C. A. Glidden	Marysville
CLASS V—ROADSTERS—STALLIONS.		
Willard Wilkes	J. B. Ramsey	Meridian
Alcantara	J. B. Ramsey	Meridian
Dawn	G. Ohleyer, Jr.	Yuba City
Cleveland	M. C. Lazier	Marysville
MARES.		
Maud	J. B. Ramsey	Meridian
Ruby	G. Ohleyer, Jr.	Yuba City
GELDINGS.		
Dexter	J. Giblin	Marysville
General Blucher	W. F. Doty	Meridian
	F. J. Tomb	Marysville
CLASS VI—CARRIAGE HORSES.		
Team	Geo. Wilson	Yuba City
Tom	J. B. Ramsey	Meridian
Daisy	D. B. Boulware	Marysville
Team	S. Harding	Marysville

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS VII—ROADSTER TEAMS.			
	W. F. Doty	Meridian	\$10 00
	J. Giblin	Yuba City	\$8 00
CLASS VIII—SADDLE HORSES.			
	N. J. Sligar	Marysville	\$5 00
CLASS IX—COLTS.			
	A. S. Wight	Honcut	\$8 00
	J. Seaward	Wheatland	\$10 00
	D. B. Boulware	Marysville	\$5 00
CLASS X—SWEEPSTAKES.			
Alcantara	J. B. Ramsey	Meridian	\$25 00
City Louise	C. Gottwals	Yuba City	\$15 00
CLASS XI—JACKS AND JENNIES—JACKS.			
	J. Peters	Yuba City	\$5 00
	J. Peters	Yuba City	\$2 50
	M. C. Lazier	Marysville	\$10 00
JENNIES.			
	M. C. Lazier	Marysville	\$2 50
	M. C. Lazier	Marysville	\$5 00
CLASS XII—DURHAMS—BULLS.			
	J. Peters	Yuba City	\$15 00
	J. Peters	Yuba City	\$8 00
	J. Peters	Yuba City	\$3 00
COWS.			
Mary	J. Peters	Yuba City	\$12 00
Ida	J. Peters	Yuba City	\$6 00
Pride	J. Peters	Yuba City	\$3 00
	J. Peters	Yuba City	\$5 00
CLASS XIX—HERDS.			
	J. Peters	Yuba City	\$20 00
CLASS XX—GRADED CATTLE—BULLS.			
	J. Peters	Yuba City	\$3 00
	J. Peters	Yuba City	\$2 00
COWS.			
	J. Peters	Yuba City	\$10 00
	J. Peters	Yuba City	\$5 00
CLASS XXVI—SWINE.			
	J. Peters	Yuba City	\$6 00
	J. Peters	Yuba City	\$5 00
	J. Peters	Yuba City	\$3 00
	M. Cahill	Marysville	\$3 00
	M. Cahill	Marysville	\$2 00
CLASS XXIX—POULTRY.			
Mrs. M. Farrell	Marysville	\$1 50	
Mrs. M. Farrell	Marysville	\$1 50	
Mrs. M. Farrell	Marysville	\$1 50	
Mrs. M. Farrell	Marysville	\$1 50	
Mrs. M. Farrell	Marysville	\$1 50	
Mrs. M. Farrell	Marysville	\$1 50	
Mrs. M. Farrell	Marysville	\$2 50	
Mrs. M. Farrell	Marysville	\$1 50	
Mrs. Van Buskirk	Marysville	\$2 50	
James Bligh	Marysville	\$1 50	
Wm. Jefferts	Brown's Valley	\$1 50	
Wm. Jefferts	Brown's Valley	\$1 50	
Fred. Matti	Marysville	\$1 50	
Chas. Poag	Marysville	\$2 00	

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Dried plums.....	C. N. Tharsing.....	Marysville.....
Dried prunes.....	C. N. Tharsing.....	Marysville.....
Dried prunes.....	C. N. Tharsing.....	Marysville.....
Dried apricots.....	C. N. Tharsing.....	Marysville.....
Dried apricots.....	C. N. Tharsing.....	Marysville.....
Dried pears.....	C. N. Tharsing.....	Marysville.....
Exhibit of nuts.....	C. N. Tharsing.....	Marysville.....
Soft-shell almonds.....	C. N. Tharsing.....	Marysville.....
Ornamental foliage plants.....	C. N. Tharsing.....	Marysville.....
Largest pumpkin.....	C. N. Tharsing.....	Marysville.....
Olives in glass.....	C. N. Tharsing.....	Marysville.....
Ferns.....	C. N. Tharsing.....	Marysville.....
Trees and plants.....	C. N. Tharsing.....	Marysville.....
Brown bread.....	Mrs. C. H. Crowell.....	Marysville.....
Biscuit.....	Mrs. C. H. Crowell.....	Marysville.....
Brown bread.....	Jessie Hull.....	Yuba City.....
Biscuit.....	Jessie Hull.....	Yuba City.....
Cake.....	Jessie Hull.....	Yuba City.....
Wheat bread.....	Arvilla Mihills.....	Yuba City.....
Biscuit.....	Arvilla Mihills.....	Yuba City.....
Biscuit.....	Bertha Mooney.....	Marysville.....
Australian wheat in sheaf.....	Geo. Summy.....	Sutter City.....

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Top buggy.....	Chas. Raish.....	Marysville.....
Open buggy.....	Chas. Raish.....	Marysville.....
Spring market wagon.....	Chas. Raish.....	Marysville.....
General display of agricultural imple- ments.....	Hampton Hardware Co.....	Marysville.....
Top buggy.....	Katzner, Russel & Chase.....	Marysville.....
Cart.....	Katzner, Russel & Chase.....	Marysville.....
Open buggy.....	T. Niesen.....	Marysville.....
Cider mill and press.....	White, Cooley & Cutts.....	Marysville.....
Hay cutter.....	White, Cooley & Cutts.....	Marysville.....
Lawn mower.....	White, Cooley & Cutts.....	Marysville.....
Gopher trap.....	White, Cooley & Cutts.....	Marysville.....
Farm gate.....	White, Cooley & Cutts.....	Marysville.....
Refrigerator.....	White, Cooley & Cutts.....	Marysville.....
Grain separator.....	White, Cooley & Cutts.....	Marysville.....
Posthole digger.....	White, Cooley & Cutts.....	Marysville.....

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
DeWitt Ames.....	Marysville.....	.....	.....\$3 00
A. Peri.....	Marysville.....	.....	.....\$25 00
Frost & Shaffer.....	Marysville.....	.....	.....\$25 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Frost & Shaffer.....	Marysville.....	.....	.....\$5 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Frost & Shaffer.....	Marysville.....	.....	.....\$2 00
Miller & Hall.....	Marysville.....	.....	.....\$10 00
Miller & Hall.....	Marysville.....	.....	.....\$2 00
Miller & Hall.....	Marysville.....	.....	.....\$50 00
White, Cooley & Cutts.....	Marysville.....	.....	.....\$3 00
White, Cooley & Cutts.....	Marysville.....	.....	.....\$2 00
White, Cooley & Cutts.....	Marysville.....	.....	.....\$3 00
White, Cooley & Cutts.....	Marysville.....	.....	.....\$5 00
White, Cooley & Cutts.....	Marysville.....	.....	.....\$5 00
White, Cooley & Cutts.....	Marysville.....	.....	.....\$50 00
White, Cooley & Cutts.....	Marysville.....	.....	.....\$2 00
Mrs. C. H. Crowell.....	Marysville.....	.....	.....\$10 00
Mrs. C. H. Crowell.....	Marysville.....	.....	.....\$2 00
B. R. Boorman.....	Marysville.....	.....	.....\$5 00
Mrs. Wimberly.....	Marysville.....	.....	.....\$3 00
Mrs. Wimberly.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$5 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$5 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$5 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$3 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$20 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$3 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$10 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$3 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$1 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$10 00
Hampton Hardware Co.....	Marysville.....	.....	.....\$2 00

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Telescope, etc.	Minnie E. Townsend	Marysville
General exhibit of boots and shoes	B. F. Gilman & Co.	Marysville
Gents' boots and shoes, and ladies' shoes	B. F. Gilman & Co.	Marysville
General exhibit of sporting goods	P. George	Marysville
Rifle	P. George	Marysville
Sewing machine	P. George	Marysville
Rustic furniture	C. N. Tharsing	Marysville

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Worsted anchor	Maggie Campbell	Marysville
Pincushion and lace	Emma Cruger	Marysville
Crochet work	Mrs. Wenzel	Marysville
Crochet work	Lillie Gottwals	Yuba City
Crochet work	Etta Wenzel	Marysville
Fancy work	Mrs. W. Englund	Marysville
Crochet work	Miss J. E. Gelzhauser	Marysville
Bed quilt	Mrs. W. Daniels	Marysville
Crochet work	Sadie Buckner	Strawb'y Valley
Knitting work	Mrs. T. M. Gee	Marysville
Fancy work	Mrs. K. L. Doty	Meridian
Knitting and crochet work	May Hogan	Marysville
Lace	Mrs. Patridge	West Butte
Scrap book	Ethel Klein	Marysville
Crochet lace skirt	Mrs. Parmlee	Marysville
Quilt	Elizabeth Smith	Marysville
Carpet, five pieces	Frost & Shaffer	Marysville
Mats	Frost & Shaffer	Marysville
Rag carpet	Meyer & Harrigan	Marysville
Apron	M. Nutley	Marysville
Underwear	Nellie Crook	Marysville
Crochet work	Mrs. S. Ribble	Brownsville
Exhibit of carpets and mats	Meyer & Harrigan	Marysville
Cushion	Mrs. L. Burke	Marysville
Rug	M. Burns	Marysville
Embroidered table cover	Winnie Casey	Marysville
Knitted stockings	Mrs. O. H. Sawtelle	Marysville
Embroidery	Mrs. L. H. Spiers	Marysville
Photograph holders	Nettie Kelly	Marysville
Tidies, etc.	Mrs. J. W. Greeley	Marysville
Embroidery	Mrs. Waldron	Marysville
Canvas work	Mrs. Waldron	Marysville
Fancy articles	May Waldron	Marysville
Quilt	Mrs. C. F. Rainey	Marysville
Splashers	May Meek	Marysville
Lace	Maggie Meek	Marysville
Cushion	Ellen Meek	Marysville
Table scarf	Cora Elder	Marysville
Hair work	Catherine Kerns	Yuba City
Table scarf	Katie Donahoe	Marysville
Piano cover	Maggie Lowrey	Marysville
Necktie case	Mrs. Boulton	Marysville
Lace work	Miss Martinez	Marysville
Fancy work	Annie Gallagher	Marysville
Quilt	Mrs. B. A. Devolt	Marysville
Apron, etc.	Belle Campbell	Marysville
Baskets	Miss McConville	Marysville
Spread	Mrs. Wimberly	Linda
Hat crown	M. E. Lowrey	Marysville
Moss work	S. E. Wilkie	Yuba City
Lace	S. E. Wilkie	Yuba City
Table scarf	Miss Murdoch	Marysville
Crochet work	Mrs. G. J. Crossley	Marysville

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Handkerchief	Mrs. L. H. Spiers	Marysville	\$2 00
Woolen goods	Marysville Mills	Marysville	\$100 00
Blankets	Marysville Mills	Marysville	\$10 00
Blankets	Marysville Mills	Marysville	\$10 00
Flannels	Marysville Mills	Marysville	\$5 00
Tweeds	Marysville Mills	Marysville	\$5 00
Flannel underwear	Marysville Mills	Marysville	\$2 00
Flannel overshirts	Marysville Mills	Marysville	\$2 00

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
Paintings	Carrie Gottwals	Yuba City	\$5 00
Canvas	Lizzie Swain	Marysville	\$5 00
Paintings	Lizzie Swain	Marysville	\$3 00
Paintings	Lizzie Swain	Marysville	\$20 00
Paintings	Ellen Meek	Marysville	\$10 00
China	Ida Johnson	Marysville	\$2 00
Millinery	Kelly & Johnson	Marysville	\$15 00
Cal. brandy and liquors	W. T. Ellis & Son	Marysville	\$150 00
Ship	Bessie Roberts	Yuba City	\$2 00
Ship	Bessie Roberts	Yuba City	\$2 50
Ship	Mrs. E. A. Forbes	Marysville	\$15 00
Ship	Miss Ostrom	Wheatland	\$5 00
Ship	Mrs. A. H. Boulton	Marysville	\$5 00
Ship	E. E. Meek	Marysville	\$5 00
Ship	Catherine Kerns	Yuba City	\$2 00
Canvas	F. G. Dowane	Wheatland	\$1 00
Canvas	Mrs. Niesen	Marysville	\$5 00
Canvas	Mrs. E. A. Forbes	Marysville	\$2 00
Shells	Ada L. Townsend	Marysville	\$0 50
Shells and views	P. W. Griffiths	Marysville	\$10 00
Shells	"Democrat" Pub. Co.	Marysville	\$7 50
Shells	"Appeal" Pub. Co.	Marysville	\$7 50
Shells	"Appeal" Pub. Co.	Marysville	\$5 00
Shells	Mrs. N. D. Coombs	Marysville	\$3 00
Shells and receipt	G. W. Harney	Marysville	\$10 00
Shells	W. F. Sherwood	Marysville	\$2 00

JUVENILE DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
	Etta Wenzel	Marysville	\$1 00
	Annie Englund	Marysville	\$5 00
	Annie Englund	Marysville	\$2 00
	Ethel Klein	Marysville	\$3 00
	Grace Cunningham	Marysville	\$4 00
	Edna Moore	Marysville	\$2 00
	Lucy Flint	Marysville	\$1 00
	Edna Moore	Marysville	\$0 50
	Frankie Meek	Marysville	\$2 00
	Frankie Meek	Marysville	\$2 00
	Frankie Meek	Marysville	\$2 00

DANCING.

Date.	Dancers.	Address.
September 2, 1890.....	Miss Nellie Bourne.....	Marysville.....
September 2, 1890.....	John Dennison.....	Sacramento.....
September 3, 1890.....	Ellen Hogan.....	Marysville.....
September 3, 1890.....	C. W. Glidden.....	Marysville.....
September 4, 1890.....	Lizzie Hall.....	Orland.....
September 4, 1890.....	N. Newton.....	Woodland.....
September 5, 1890.....	Sadie Tyrrell.....	Marysville.....
September 5, 1890.....	J. P. Colford.....	Marysville.....
September 6, 1890.....	Mrs. E. Kuorsa.....	Marysville.....
September 6, 1890.....	F. C. Schumacher.....	Marysville.....

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 2, 1890.

RACE No. 1—RUNNING.

One hundred dollars. No entrance fee. Five eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Joe Hooker.....	J. E. King.....	Woodland.
by Deswater Jim.....	R. H. Newton.....	Woodland.
by Compromise.....	A. Phillips.....	Ione.
by Norfolk.....	Dennison Bros.....	Sacramento.
by Powhattan.....	W. M. Murry.....	Sacramento.

SUMMARY.

Joe Hooker.....	1
Deswater Jim.....	2
Compromise.....	3
Norfolk.....	0
Powhattan.....	0

Time—1:04½.

RACE No. 2—TROTTING.

Free for all. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Brigadier.....	D. E. Knight.....	Marysville.
by Dave Hill, Jr.....	T. C. Snider.....	Yolo County.
by Brigadier.....	Wm. Doty.....	Meridian.

SUMMARY.

Brigadier.....	1
Dave Hill.....	2
Doty.....	3

Time—2:42; 2:46; 2:49½.

RACE No 3—RUNNING.

Purse, two hundred dollars. Three quarters of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Ironwood.....	H. Willits.....	Willits.
by Norfolk.....	Dennison Bros.....	Sacramento.
by Compromise.....	A. Phillips.....	Ione.
by Partisan.....	W. M. Murry.....	Sacramento.

SUMMARY.

Leatherwood 1
 Mohawk 2
 Time—1:17½; 1:17½; 1:18.

WEDNESDAY, SEPTEMBER 3, 1890.

RACE No. 4—TROTTING.

For three-year olds owned in the district. Purse, two hundred and thirty-three and thirty-three cents. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Actor, by Prompter	Stoddard & De Gomez	Alameda
Silver King, by Jim Mulvenna	G. W. Woodard	Yuba

SUMMARY.

Silver King 1 1 1
 Actor 2 2 2
 Time—2:53½; 2:49½; 2:48½.

RACE No. 5—PACING.

For horses without a record. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Minnie K, by Billy Hayward	Charles W. Knox	Oakland
C W G, by Adonis	C. W. Goddard	Sacramento
Tom Norton, by Tilton Almont	Tom Norton	Sacramento
Our Dick, by Gibraltar	H. Willis	Carson City

SUMMARY.

Our Dick 1
 C W G 2
 Time—2:22½; 2:25½; 2:23; 2:31½.

RACE No. 6—PACING.

2:30 Class. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Belle Button, by Alex Button	G. W. Woodard	Woodland
Tom Ryder, by Alex Button	R. H. Newton	Woodland

SUMMARY.

Tom Ryder 1
 Belle Button 2
 Time—2:22; 2:23; 2:25; 2:23½; 2:24.

THURSDAY, SEPTEMBER 4, 1890.

RACE No. 7—TROTTING.

Class. Open to all. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Little Billy	C. O. Thornquest	Oakland.
Privateer	S. K. Trefry	Sacramento.
	Sagebrush Training Nursery	Carson, Nev.

SUMMARY.

Privateer 1
 Alpha 2
 Decision 3
 Time—2:54; 2:48; 2:50.

RACE No. 8—RUNNING.

For two hundred dollars. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Baywater Jim	R. H. Newton	Woodland.
the Ripper, by Captain Jack, Jr.	H. Willits	Willits.
Joe Hooker	J. E. King	Woodland.

SUMMARY.

the Ripper 1
 Joe Hooker 2
 B H 3
 Time—0:50; 0:50½.

RACE No. 9—RUNNING.

Open to all. Purse, two hundred dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Douglas, by Leinster	Dennison Bros.	Sacramento.
by Flood	W. M. Murry	Sacramento.
by Jim Brown	A. Tietjens & G. Watson	Sacramento.

SUMMARY.

Adonis 1
 Douglass 2
 Douglass 3
 Time—1:46.

FRIDAY, SEPTEMBER 5, 1890.

RACE No. 10—TROTTING.

3:00 Class. District. Purse, four hundred dollars.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Balance-All, by Brigadier	D. E. Knight	Ma
Billy Doty, by Brigadier	Wm. Doty	Ma
Vidette, by Dave Hill, Jr.	T. C. Snider	Yolo

SUMMARY.

Vidette	1
Balance-All	2
Billy Doty	3

Time—2:46; 2:45½; 2:40.

RACE No. 11—TROTTING.

For four-year olds. Open to all. Purse, four hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Cupid, by Sidney	C. O. Thornquest	Yolo
Laura Z, by Alex Button	C. B. Bigelow	Yolo
Annie E, by Tilton Almont	W. R. Merrill	Yolo
Gibber, by Gibraltar	Sagebrush Trotting Nursery	Carson

SUMMARY.

Laura Z	1
Annie E	2
Cupid	3

Time—2:36½; 0:00; 2:34½; 2:38; 2:36½.

SATURDAY, SEPTEMBER 6, 1890.

RACE No. 12—RUNNING.

Open to all. Purse, two hundred and fifty dollars. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Leatherwood, by Ironclad	H. Willits	San
Dave Douglas, by Leinster	Dennison Bros.	San
Leland, by Flood	W. M. Murry	San
Lucky Dan, by Compromise	A. Phillips	San

SUMMARY.

Leatherwood	1
Dave Douglas	2
Leland	3

Time—1:48; 1:47.

RACE No. 13—PACING.

Class. Open to all. Purse, five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Adonis	C. W. Goddard	Sacramento.
by Washington	E. Downer	Oakland.
by Echo	C. O. Thornquest	Oakland.
by Sterling	S. C. Tryon	Sacramento.
by Echo	N. N. Craig	San Luis Obispo.
	Sagebrush Trotting Nursery	Carson, Nev.

SUMMARY.

Acrobat	1
Castillo	2
CW G	3

Time—2:26½; 2:28½; 2:25.

RACE No. 14—TROTTING.

Class. Open to all. Purse, six hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Prism	T. E. Keating	Sacramento.
Hayward, by Poscora Hayward	L. Levy	Sierraville.
by Brown Jug	G. T. Johnson	San José.
Patchen, by Henry B. Patchen	J. E. Abbott	Table Bluff.
by Carr's Mambrino	J. D. Carr	Salinas.

SUMMARY.

Frank M	1
Argent	2
Johnny Hayward	3
Maud H	4

Time—2:29½; 2:27½; 2:25½.

TRANSACTIONS

OF THE

SEVENTEENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of Santa Cruz.

REPORT.

OFFICERS OF THE ASSOCIATION.

SANTA CRUZ, December 1, 1890.

L. K. BALDWIN
OSCAR L. GORDON
CITY BANK

Honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Fourteenth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

OSCAR L. GORDON,
Secretary.

DIRECTORS.

L. K. BALDWIN
D. W. GROVER
A. NOBLE
MARTIN KINSLEY
D. M. LOCKE
R. C. KIRBY
W. H. AIKIN
P. T. SHIBLING

RECEIPTS AND EXPENDITURES.

Receipts.

Annual membership	\$132 25
Admission tickets	390 15
Perquisites	12 50
Appropriation	2,000 00
	<u>294 61</u>
	<u>\$2,863 79</u>

Expenditures.

Refunds to exhibitors	\$1,836 50
Of Pavilion and stock yard	200 00
Interest on note to City Bank	9 65
Expenses	<u>817 64</u>
	<u>\$2,863 79</u>

Surplus in excess of receipts	\$294 61
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ANNUAL ADDRESS.

By HON. W. H. GALBRAITH.

The year has rolled around, and our autumnal fair is again at hand. We should congratulate ourselves that the season is a prosperous one and our people have reaped a fair reward for their efforts in the various avenues of business. By means of such fairs as this we have an opportunity to become acquainted with the products of the various sections of our county, and to obtain a better idea of the progress that is made by our fellow citizens who are actively engaged in promoting the material interests of this section of the State.

We have on exhibition the products of the field, the orchard, the vineyard, the factory and shop, works of art, and curiosities of many kinds which are fitting attendants upon a display of the works of man. Such a display as we see here this evening is a credit of the highest order to the perseverance and industry of our people. It requires no small amount of courage in the orchardist and vineyardist to risk year after year time and thousands of dollars in cash in a venture, the result of which depends so much, not only upon the capriciousness of nature, but also upon the fickleness of the market.

But Rome was not built in a day; neither is a great industry founded in a year. Men and women, without courage and hardihood, are not the stuff out of which great nations are made, or even prosperous communities.

We see here also abundant evidence of woman's handiwork, both useful and ornamental. I am willing to admit that, everything considered, woman is superior to man in courage, industry, and perseverance. In fact, I don't know what progress the world would make without her.

Fairs, such as this, ought to be considered educational institutions, schools of training in object lessons. All knowledge is the result of comparison. From the time that the child begins to ask "why," full of life's surprise, until he reaches the full attainments of old age, his education is acquired by processes of comparison. He must be skilled in the knowledge of things material, or discipline himself in the more abstruse studies of logic and psychology, all his wisdom is gained by his power of comparison.

The first faculty to be developed in education is that of perception. Hence, whatever cultivates the perceptive faculties and incites to action is useful as a means of education. It is quite noticeable that the improvements in educational methods, a general increase in intelligence as connected with human industries, and fairs or industrial exhibitions have kept about an even pace in the world's advancement.

The fair, as we understand the term, is an institution of ancient origin in our own country. In the Old World a fair is usually connected with a market or a place for the sale of stock or commodities.

The display of products for the sake of mutual advantage is dignified by the name exposition. However, what's in a name? It is the name of the institution that concerns us.

In the early part of this century the American Institute set in operation a system of fairs, for the purpose of enabling the people to become better informed upon industrial matters, thereby setting an example which has been extensively imitated, both in this country and in Europe. The world's fairs of the past twenty years have been great expositions, and at the same time have incited a spirit of generous emulation that will ultimately result in great good to the whole world.

Time will not permit me to indulge in much generalization, and I will speak more particularly of our own fair and the lessons to be learned here. It is unfortunate that the entire county does not unite in making a complete display of the products of this wonderful little corner of the State.

For a moment consider what a county we have:

From the Pajaro River to the San Mateo line, and from ocean to ocean, it would seem that our county is pregnant with possibilities. We have thousands of acres of virgin forests of magnificent redwoods; with vast quantities of bituminous rock containing material enough to pave one half of the United States; with quarries of unlimited extent that produce the finest lime on the coast; with powder and leather of the highest quality; with the beet sugar industry firmly established; with the hills smiling down to the more humble, but no less joyful, valleys; with orchards bending with their loads of luscious fruit; with dairies putting out their golden product of delicious butter; with numerous water powers waiting to be harnessed to the pulley and the mill; with vines that will make the most favored cellars of France and Italy look to their laurels; with the best bred horses and cattle; with the more ordinary crops of every-day husbandry; with sturdy and handsome women, how can we fail to have hope in the future of our beautiful county?

Within eighty miles of the metropolis of the great Pacific Slope; with a railroad and water communication with the rest of the world, and a climate unsurpassed, how can Santa Cruz County fail to become rich and influential? We must agree with Dr. Johnson, that no other place has made any great progress in moral culture and the refining of art and literature that had not wealth.

It is right and proper that we strive to advance our material interests. In the midst of the turmoil and strife of business there is time, for at least, to turn aside to admire beautiful flowers. For most of us there is a lesson to be learned from them that savors more of the spiritual than the material. And so no fair is complete without the influence of flowers. In this respect a Santa Cruz fair is a beautiful thing, and we are reminded of that beautiful passage in the Sermon on the Mount: "Consider the lilies of the field how they grow; they toil not, neither do they spin; and yet I say unto you, that Solomon in all his glory was not arrayed like one of these." Let us open his heart to these nobler influences if he would be lifted from the grime and filth of avarice and be lifted to a higher plane of existence.

We have no occasion to urge a literal compliance with the commandment, "Thou shalt not covet," and its context. We have too many already who "take

no thought for the morrow;" they toil not, neither do they look for opportunity to toil. Between the two extremes—those who wish to and those who wish nothing—are to be found the true State builders, the backbone of society—those who must be relied upon to wrest from nature her choicest possessions that they may be applied to the interests of mankind.

With our hills and valleys overflowing with the profusion of natural gifts, why should we not be proud of our county? Still more proud may we be when we shall have, by our exertions, put Santa Cruz in the very front rank of counties, a position which she will ultimately attain.

The population of Santa Cruz County has nearly doubled in the ten years. Up the mountain sides go pluck and determination to the very summit of our highest range, and even challenge old Loma Prieta himself in the struggle for the beard upon his chin. From the highest mountain top will soon be heard one grand anthem of praise for all the benefits which we have received from the hand of a bountiful Providence. The day will soon come, we prophesy, when the vineyards and orchards of the highlands, the plains of El Pajaro, the lands that skirt the ocean, and the manufactories that dot our county will be making a grand display of all their products.

Let this be done once a year. Let these fairs be the milestones that mark our progress. Here we will gather once a year to compare the improvements that are being made by our fellow citizens in their various vocations, learn wherein we have made mistakes, and gather new inspiration for the battle of life.

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Percheron stallion	Martin Kinsley	Santa Cruz	\$12 00
Percheron mare	Martin Kinsley	Santa Cruz	\$12 00
CLASS II.			
Draft stallion	L. T. Almstead	Santa Cruz	\$12 00
CLASS III.			
Percheron colt, two years old	Frank K. Alzina	Santa Cruz	\$5 00
CLASS IV.			
Percheron seven years old	Hiram Gilmore	Soquel	\$8 00
Percheron colt, two years old	Geo. F. Bourcq	Santa Cruz	\$3 00
Percheron mare, two years old	Doyle & Harmon	Soquel	\$5 00
Percheron mare, two years old	L. T. Almstead	Santa Cruz	\$5 00
Percheron stallion, four years old	F. A. Hihn Co.	Santa Cruz	\$6 00
Percheron mare, three years old	F. A. Hihn Co.	Santa Cruz	\$4 00
Percheron mare, three years old	F. A. Hihn Co.	Santa Cruz	\$6 00
Percheron mare, one year old	I. Gray	Soquel	\$4 00
Percheron mare, six months old	P. T. Stribling	Santa Cruz	\$3 00
CLASS V—CARRIAGE HORSES.			
Percheron four years old	A. P. Swanton	Santa Cruz	\$8 00
Percheron carriage horses	A. Noble	Soquel	\$8 00
Percheron carriage horses	L. T. Almstead	Santa Cruz	\$12 00
CLASS VI—BUGGY HORSES.			
Percheron buggy horses	Oscar L. Gordon	Santa Cruz	\$12 00
Percheron buggy horses	Ed. Foster	Santa Cruz	\$8 00
Percheron buggy horse	S. B. Swanton	Santa Cruz	\$6 00
Percheron buggy horse	P. T. Stribling	Santa Cruz	\$8 00
CLASS VII—HORSES OF ALL WORK.			
Percheron eight years old	Doyle & Harmon	Soquel	\$8 00
Percheron eight years old	A. Noble	Soquel	\$6 00
CLASS IX—SADDLE HORSES.			
Percheron six years old	A. Noble	Soquel	\$6 00
CLASS X—BROOD MARES.			
Percheron mare and colt	W. Oliver	Soquel	\$10 00
Percheron mare and colt	F. A. Hihn Co.	Santa Cruz	\$8 00
SPECIAL CLASS.			
Percheron stallion, two years old	George W. Scofield	Santa Cruz	\$5 00
Percheron seven years old	J. Francis	Santa Cruz	\$6 00
CLASS I—DURHAMS—BULLS.			
Percheron one year old	L. K. Baldwin	Santa Cruz	\$4 00
Percheron one year old	L. K. Baldwin	Santa Cruz	\$3 00
Percheron one year old	G. P. Laird	Santa Cruz	\$3 00
CLASS II—JERSEYS—BULLS.			
Percheron (4768, A. J. H. B.)	Oscar L. Gordon	Santa Cruz	\$10 00
Percheron (4768, A. J. H. B.), one year old	Lewis W. Gordon	Santa Cruz	\$7 00
Percheron (4768, A. J. H. B.), one year old	Martin Kinsley	Santa Cruz	\$3 00

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
COWS.		
Lulu (11692), three years old.....	Oscar L. Gordon.....	Santa Cruz.....
Tusnelda (11693), three years old.....	Oscar L. Gordon.....	Santa Cruz.....
Ursula (12245), one year old.....	Oscar L. Gordon.....	Santa Cruz.....
Leto (12247), six months old.....	Oscar L. Gordon.....	Santa Cruz.....
Urania (12246), four months old.....	Oscar L. Gordon.....	Santa Cruz.....
Lalla Rookh (12248, A. J. H. B.).....	Martin Kinsley.....	Santa Cruz.....
CLASS III—HOLSTEINS—COWS.		
Shadeland Dorcia.....	J. T. Osborn.....	Santa Cruz.....
CLASS VI—JERSEYS NOT RECORDED—BULLS.		
Ingomar 2d, four years old.....	D. B. Woolf.....	Santa Cruz.....
Orian, three months old.....	Oscar L. Gordon.....	Santa Cruz.....
COWS.		
Eudora, three years old.....	Oscar L. Gordon.....	Santa Cruz.....
Oriana, one year old.....	Oscar L. Gordon.....	Santa Cruz.....
—, two years old.....	D. M. Locke.....	Santa Cruz.....
—, two years old.....	D. M. Locke.....	Santa Cruz.....
—, one year old.....	D. M. Locke.....	Santa Cruz.....
—, three years old.....	D. M. Locke.....	Santa Cruz.....
—, three years old.....	M. W. Brown.....	Santa Cruz.....
—, five years old.....	Wm. Fitch.....	Santa Cruz.....
CLASS VII—HOLSTEINS NOT RECORDED—COWS.		
—, two years old.....	J. T. Osborn.....	Santa Cruz.....
CLASS X—GRADE DAIRY—BULLS.		
—, three years old.....	G. P. Laird.....	Santa Cruz.....
COWS.		
—, three years old.....	M. W. Brown.....	Santa Cruz.....
—, one year old.....	G. P. Laird.....	Santa Cruz.....
—, one year old.....	G. P. Laird.....	Santa Cruz.....
—, four months old.....	G. P. Laird.....	Santa Cruz.....
—, four months old.....	G. P. Laird.....	Santa Cruz.....
—, six months old.....	A. E. Curtis.....	Santa Cruz.....
—, two years old.....	G. P. Laird.....	Santa Cruz.....
—, four months old.....	Wm. Fitch.....	Santa Cruz.....
Molly, eighteen months old.....	George W. Bliss.....	Santa Cruz.....
Bessie, twelve months old.....	George W. Bliss.....	Santa Cruz.....
SHEEP—CLASS I.		
Southdown ram, two years old.....	Martin Kinsley.....	Santa Cruz.....
Southdown ram, one year old.....	Martin Kinsley.....	Santa Cruz.....
Southdown ewe, two years old.....	Martin Kinsley.....	Santa Cruz.....
Southdown ewe, two years old.....	Martin Kinsley.....	Santa Cruz.....
Three ram lambs, under one year.....	Martin Kinsley.....	Santa Cruz.....
Three ewe lambs, one year old.....	Martin Kinsley.....	Santa Cruz.....
Three ewe lambs, one year old.....	Martin Kinsley.....	Santa Cruz.....
Southdown grade ewe, two years old.....	Martin Kinsley.....	Santa Cruz.....
Southdown grade ewe, two years old.....	Martin Kinsley.....	Santa Cruz.....
ANGORA GOATS—CLASS IV.		
Male, eleven months old.....	Geo. N. Scofield.....	Santa Cruz.....
Female, eleven months old.....	Geo. N. Scofield.....	Santa Cruz.....
SWINE.		
Two sows, nine months old.....	L. K. Baldwin.....	Santa Cruz.....
Boar, one year old.....	R. C. Kirby.....	Santa Cruz.....
Sow, under one year.....	R. J. Mattison.....	Soquel.....
Boar, two years old.....	Martin Kinsley.....	Santa Cruz.....
Boar, under one year.....	Martin Kinsley.....	Santa Cruz.....
Sow, two years old.....	Martin Kinsley.....	Santa Cruz.....
Sow, one year old.....	Martin Kinsley.....	Santa Cruz.....
Sow, under one year.....	Martin Kinsley.....	Santa Cruz.....
Boar, one year old.....	Honora Aston.....	Santa Cruz.....
Sow, one year old.....	Honora Aston.....	Santa Cruz.....

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
POULTRY.			
Male Leghorns.....	Martin Kinsley.....	Santa Cruz.....	\$3 00
Black face Black Spanish.....	Martin Kinsley.....	Santa Cruz.....	\$3 00
Golden.....	Martin Kinsley.....	Santa Cruz.....	\$3 00
Spangled Hamburgs.....	Martin Kinsley.....	Santa Cruz.....	\$3 00
Spangled Hamburgs.....	Martin Kinsley.....	Santa Cruz.....	\$1 50
Turkeys.....	Martin Kinsley.....	Santa Cruz.....	\$5 00
Brahmas.....	Carrie Scott.....	Santa Cruz.....	\$3 00
Brahma roosters.....	Carrie Scott.....	Santa Cruz.....	\$1 50
Brahmas, six months old.....	A. L. Ward.....	Soquel.....	\$3 00
Breeding pen.....	A. L. Ward.....	Soquel.....	\$5 00
Leghorns.....	Carrie Scott.....	Santa Cruz.....	\$1 50
Leghorns.....	G. P. Laird.....	Santa Cruz.....	\$1 50
Bantams and chicks.....	Hattie Curtis.....	Santa Cruz.....	\$3 00
Geese.....	R. J. Mattison.....	Soquel.....	\$1 50
Leghorns.....	P. T. Stribling.....	Santa Cruz.....	\$3 00
Leghorns.....	Mrs. H. Forbes.....	Santa Cruz.....	\$3 00
Leghorns.....	Mrs. H. Forbes.....	Santa Cruz.....	\$1 50
Leghorns.....	Mrs. H. Forbes.....	Santa Cruz.....	\$1 50
Leghorns.....	Martin Kinsley.....	Santa Cruz.....	\$3 00
Leghorns.....	Martin Kinsley.....	Santa Cruz.....	\$8 00
Leghorns.....	Mrs. H. Forbes.....	Santa Cruz.....	\$3 00
Leghorns.....	Mrs. H. Forbes.....	Santa Cruz.....	\$3 00
Leghorns.....	Mrs. H. Forbes.....	Santa Cruz.....	\$1 50
Leghorns.....	Carrie Scott.....	Santa Cruz.....	\$6 00
Leghorns.....	P. T. Stribling.....	Santa Cruz.....	\$3 00

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
AGRICULTURE.			
Wheat.....	Martin Kinsley.....	Santa Cruz.....	\$3 00
Wheat.....	Martin Kinsley.....	Santa Cruz.....	\$3 00
Wheat.....	D. B. Woolf.....	Santa Cruz.....	\$2 00
Wheat.....	C. S. Johnson.....	Santa Cruz.....	\$3 00
Wheat.....	C. S. Johnson.....	Santa Cruz.....	\$2 00
Wheat.....	John Grant.....	Santa Cruz.....	\$2 00
Wheat.....	J. S. Young.....	Santa Cruz.....	\$1 00
Wheat.....	J. S. Young.....	Santa Cruz.....	\$4 00
Wheat.....	J. S. Young.....	Santa Cruz.....	\$4 00
Wheat.....	J. S. Young.....	Santa Cruz.....	\$4 00
Wheat.....	J. S. Young.....	Santa Cruz.....	\$4 00
Wheat.....	John Grant.....	Santa Cruz.....	\$2 00
Wheat.....	Doyle & Harmon.....	Santa Cruz.....	\$2 00
Wheat.....	Doyle & Harmon.....	Santa Cruz.....	\$2 00
Wheat.....	Doyle & Harmon.....	Santa Cruz.....	\$1 50
Wheat.....	Doyle & Harmon.....	Santa Cruz.....	\$2 00
Wheat.....	A. Noble.....	Soquel.....	\$3 00
Wheat.....	A. Noble.....	Soquel.....	\$2 00
Wheat.....	A. L. Ward.....	Soquel.....	\$2 00
Wheat.....	A. L. Ward.....	Soquel.....	\$3 00
Wheat.....	R. J. Mattison.....	Soquel.....	\$3 00
Wheat.....	R. J. Mattison.....	Soquel.....	\$3 00
Wheat.....	R. J. Mattison.....	Soquel.....	\$2 00
Wheat.....	R. J. Mattison.....	Soquel.....	\$3 00
Wheat.....	D. D. Dodge.....	Santa Cruz.....	\$1 00
Wheat.....	G. P. Laird.....	Santa Cruz.....	\$3 00
Wheat.....	R. R. Jones.....	Laurel.....	\$2 00
Wheat.....	Hiram Gilmore.....	Soquel.....	\$1 00
Wheat.....	Hiram Gilmore.....	Soquel.....	\$2 00
Wheat.....	Hiram Gilmore.....	Soquel.....	\$2 00
Wheat.....	Dakin & Loomis.....	Soquel.....	\$2 00

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Cayne olives.....	Mrs. C. McKenzie	Santa Cruz
Oblonga olives.....	Mrs. C. McKenzie	Santa Cruz
Ten varieties apples.....	J. S. Young	Santa Cruz
Five varieties apples.....	J. S. Young	Santa Cruz
Easter Beurre pears.....	Thomas Slaughter	Wrights
Third largest and best assortment.....	J. S. Young	Santa Cruz
Peanuts.....	G. Whitcomb	Soquel

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
VITICULTURE.		
Second best assortment of table grapes.	A. S. Miller & Son	Wrights
Verdal grapes	A. S. Miller & Son	Wrights
Purple Cornichon grapes	A. S. Miller & Son	Wrights
Hamburg Muscat grapes	A. S. Miller & Son	Wrights
Hamburg grapes	Doyle & Harmon	Santa Cruz
Muscat of Alexandria grapes	Doyle & Harmon	Santa Cruz
White D'Nice grapes	Thomas Slaughter	Wrights
Cornichon grapes	Thomas Slaughter	Wrights
Flame Tokay grapes	W. H. Aikin	Laurel
Cornichon grapes	W. H. Aikin	Laurel
Muscat of Alexandria grapes	W. H. Aikin	Laurel
Muscat of Hamburg grapes	W. H. Aikin	Laurel
Malaga grapes	W. H. Aikin	Laurel
Rose of Peru grapes	W. H. Aikin	Laurel
Mission grapes	W. H. Aikin	Laurel
Third best assortment of table grapes.	Henry Mel	Glenwood
Flame Tokay grapes	A. G. Rose & Bro.	Santa Cruz
Verdal grapes	A. G. Rose & Bro.	Santa Cruz
General and best assortment of table grapes	W. W. Waterman	Laurel
Flame Tokay grapes	W. W. Waterman	Laurel
Muscat of Alexandria grapes	W. W. Waterman	Laurel
Muscat Rose grapes	W. W. Waterman	Laurel
Verdal grapes	W. W. Waterman	Laurel
Isabella grapes	W. W. Waterman	Laurel
Barbarossa grapes	W. W. Waterman	Laurel
White Tokay grapes	W. W. Waterman	Laurel
Rose of Peru grapes	W. W. Waterman	Laurel
Black Morocco grapes	W. W. Waterman	Laurel
Mission grapes	W. W. Waterman	Laurel
Black Hamburg grapes	W. W. Waterman	Laurel
General and best assortment of wine grapes	Henry Mel	Glenwood
Ten varieties wine grapes	Henry Mel	Glenwood
Largest and best assortment of wine	S. C. Mt. Wine Co.	Santa Cruz
Dry wine, Riesling type	S. C. Mt. Wine Co.	Santa Cruz
Burgundy wine	S. C. Mt. Wine Co.	Santa Cruz
Bordeaux wine	S. C. Mt. Wine Co.	Santa Cruz
White wine, two years old	S. C. Mt. Wine Co.	Santa Cruz
White wine, two years old	Henry Mel	Glenwood
Red wine, two years old	Henry Mel	Glenwood
Ten bottles wine	J. H. Logan	Santa Cruz
Burgundy wine	John A. Stewart	Santa Cruz
General and best assortment of wine	John A. Stewart	Santa Cruz
Red wine, two years old	John A. Stewart	Santa Cruz
Ten varieties wine	John A. Stewart	Santa Cruz
Three varieties liquors	John A. Stewart	Santa Cruz
Two varieties unfermented wines	W. W. Waterman	Laurel
Port wine	John A. Stewart	Santa Cruz
Dry white wine, Sauterne type	J. H. Logan	Santa Cruz
White wine, two years old	J. H. Logan	Santa Cruz
Red wine, two years old	J. H. Logan	Santa Cruz

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
PRESERVES.			
Jelly.....	Mrs. R. M. Wood	Santa Cruz	\$4 00
Jelly.....	Mrs. R. M. Wood	Santa Cruz	\$2 00
Jelly.....	Mrs. R. M. Wood	Santa Cruz	\$3 00
Washington plum jelly	Mrs. D. W. Thompson	Santa Cruz	\$2 00
Jelly.....	Mrs. D. W. Thompson	Santa Cruz	\$2 00
Best variety of canned fruits.	Mrs. P. T. Stribling	Santa Cruz	\$5 00
Jelly.....	Mrs. P. T. Stribling	Santa Cruz	\$3 00
Jelly.....	Mrs. A. E. Loomis	Santa Cruz	\$4 00
Plum jelly.....	Mrs. A. E. Loomis	Santa Cruz	\$4 00
Prune jelly.....	Mrs. W. H. Aikin	Laurel	\$2 00
Corncherries.....	Henry Mel	Glenwood	\$4 00
Brengage plums	Henry Mel	Glenwood	\$4 00
Plums	Mrs. P. B. Fagen	Santa Cruz	\$4 00
Quince jelly	Mrs. P. B. Fagen	Santa Cruz	\$4 00
Blackberry jelly	Mrs. J. H. Logan	Santa Cruz	\$2 00
Blackberries	Mrs. J. H. Logan	Santa Cruz	\$4 00
Cherries, canned	Mrs. J. H. Logan	Santa Cruz	\$3 00
Cherries, canned	A. G. Rose & Bro.	Santa Cruz	\$4 00
Peaches, canned	A. G. Rose & Bro.	Santa Cruz	\$2 00
Plums	A. G. Rose & Bro.	Santa Cruz	\$4 00
Plums	A. G. Rose & Bro.	Santa Cruz	\$2 00
Prunes	A. G. Rose & Bro.	Santa Cruz	\$2 00
Prunes	A. G. Rose & Bro.	Santa Cruz	\$4 00
Cherry jelly	A. G. Rose & Bro.	Santa Cruz	\$4 00
Best variety canned fruits.	Mrs. E. B. Cahoon	Soquel	\$3 00
Grapes	Mrs. E. B. Cahoon	Soquel	\$4 00
Pears	Mrs. E. B. Cahoon	Soquel	\$3 00
Pickles	Mrs. E. B. Cahoon	Soquel	\$3 00
Jam	Mrs. E. B. Cahoon	Soquel	\$3 00
Jam	Mrs. E. B. Cahoon	Soquel	\$2 00
Jam	W. W. Waterman	Laurel	\$2 00
Jam	A. G. Rose & Bro.	Santa Cruz	\$2 00
Cherries	Mrs. E. Whitcomb	Soquel	\$4 00
Cherries	Mrs. E. Whitcomb	Soquel	\$4 00
Cherries	Mrs. E. Whitcomb	Soquel	\$4 00
Cherries	Mrs. E. Whitcomb	Soquel	\$2 00
Cherries	Mrs. E. Whitcomb	Soquel	\$2 00
Preserves and pickles	Mrs. E. Whitcomb	Soquel	\$8 00
Jelly	Mrs. C. McKenzie	Santa Cruz	\$4 00
Jelly	Mrs. C. McKenzie	Santa Cruz	\$4 00
Jelly	Mrs. C. McKenzie	Santa Cruz	\$4 00
Jelly	Mrs. C. McKenzie	Santa Cruz	\$2 00
Best variety sun-dried fruits.	J. S. Gilbert	Santa Cruz	\$6 00
Cherries	J. S. Gilbert	Santa Cruz	\$2 00
(Sun-dried)	J. S. Gilbert	Santa Cruz	\$3 00
Cherries	J. S. Gilbert	Santa Cruz	\$3 00
Cherries	J. B. King	Laurel	\$3 00
Cherries	J. B. King	Laurel	\$3 00
Cherries	Thomas Slaughter	Wrights	\$2 00
Cherries	W. W. Waterman	Laurel	\$2 00
Cherries	W. W. Waterman	Laurel	\$3 00
Cherries	W. W. Waterman	Laurel	\$3 00
Evaporated fruits	Dakin & Loomis	Santa Cruz	\$10 00
Evaporated fruits	E. Whitcomb	Soquel	\$3 00
Evaporated fruits	Dakin & Loomis	Santa Cruz	\$2 00
Evaporated fruits	Dakin & Loomis	Santa Cruz	\$3 00
Evaporated fruits	Dakin & Loomis	Santa Cruz	\$3 00
Evaporated fruits	Dakin & Loomis	Santa Cruz	\$2 00
Evaporated fruits	Dakin & Loomis	Santa Cruz	\$3 00
Evaporated fruits	A. G. Rose & Bro.	Santa Cruz	\$2 00
Evaporated fruits	S. B. Wallace	Soquel	\$3 00
Evaporated fruits	S. B. Wallace	Soquel	\$3 00
Evaporated fruits	S. B. Wallace	Soquel	\$2 00
Evaporated fruits	S. B. Wallace	Soquel	\$3 00
Evaporated fruits	W. H. Aikin	Wrights	\$2 00
Evaporated fruits	W. H. Aikin	Wrights	\$2 00

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Wine vinegar	Mrs. J. H. Logan	Santa Cruz
Wine vinegar (special)	W. W. Waterman	Laurel
Plum marmalade	Mrs. D. W. Thompson	Santa Cruz
Five varieties marmalade	Mrs. E. Whitcomb	Soquel
Best arranged table of horticulture, viticulture, and preserves	Mrs. C. McKenzie	Santa Cruz

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
MANUFACTURES.		
Two sets single harness	John Werner	Santa Cruz
Open buggy	D. M. Lindsey	Santa Cruz
Three-seated carriage	E. Lukens	Santa Cruz
Washing machine	Grover & Co.	Santa Cruz
Miniature menagerie	Patterson	Santa Cruz
Axle grease (home-made)	D. W. Thompson	Santa Cruz
One set double harness	John Werner	Santa Cruz

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
NATURAL HISTORY.		
Collection of specimens	Mabel Lincoln	Santa Cruz
Collection of birds' eggs	L. Hecox	Santa Cruz
Collection of curios	Mrs. J. P. Parker	Santa Cruz
Six specimens sea moss	Mrs. J. P. Parker	Santa Cruz
Sixteen cards sea moss	Mrs. J. P. Parker	Santa Cruz
Hornet's nest	Ruth Grant	Santa Cruz
Representative of geology	C. L. Anderson	Santa Cruz
Curled redwood	Mr. Tipton	Santa Cruz
Elk horn	Mr. Hubbard	Santa Cruz
Rosedale pebbles	A. Noble	Soquel
Snakes and frogs in alcohol	W. McCann	Santa Cruz
Natural history specimens	F. L. Clark	Santa Cruz
Curled redwood	Carrie Scott	Santa Cruz

EIGHTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
FINE ARTS.		
Plush painted piano scarf	E. Hanmore	Santa Cruz
Display by local artist	Frank Heath	Santa Cruz
Crayon head from life	Frank Heath	Santa Cruz
Landscape in oil	Frank Heath	Santa Cruz
Landscape in oil	Frank Heath	Santa Cruz
Sketch from nature	Frank Heath	Santa Cruz
Sketch from nature	Frank Heath	Santa Cruz
Pencil drawing (nature)	Frank Heath	Santa Cruz
Pencil drawing (nature)	Frank Heath	Santa Cruz
Bolting banner	Mrs. F. O. Hihn	Santa Cruz
Porcelain plaque	Mrs. F. O. Hihn	Santa Cruz
Sea moss wreath	Lizzie Mills	Santa Cruz
Specimen of shell and moss work	Lizzie Mills	Santa Cruz

EIGHTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Wine vinegar (Santa Cruz)	Helen Stevens	Santa Cruz	\$3 00
Wine vinegar (from life)	Mrs. Wm. Maitland	Boulder Creek	\$6 00
Landscape	Mrs. Wm. Maitland	Boulder Creek	\$1 00
Wine vinegar (from life)	Mrs. Wm. Maitland	Boulder Creek	\$3 00
Hand leather work	Helen Stevens	Santa Cruz	\$3 00
Best display in oil	Fannie Loomis	Santa Cruz	\$6 00
Wine on redwood	E. Hanmore	Santa Cruz	\$3 00
Wine	Florence Forbes	Santa Cruz	\$2 00
Wine	Florence Forbes	Santa Cruz	\$3 00
Wine	Florence Forbes	Santa Cruz	\$1 00
Wine	Thomas Corcoran	Santa Cruz	\$2 00
Wine	Thomas Corcoran	Santa Cruz	\$2 00
Wine	Thomas Corcoran	Santa Cruz	\$1 00
Wine velvet	L. U. McCann	Santa Cruz	\$2 00
Wine silk	L. U. McCann	Santa Cruz	\$1 00
Wine	Mrs. F. O. Hihn	Santa Cruz	\$2 00
Wine	Mrs. F. O. Hihn	Santa Cruz	\$4 00
Wine	Mrs. Ellis	Santa Cruz	\$3 00
Wine	A. Gancroger	Santa Cruz	\$1 00
Wine	Lillian Richardson	Santa Cruz	\$3 00
Wine	Lillian Richardson	Santa Cruz	\$3 00
Wine	Lillian Richardson	Santa Cruz	\$2 00
Wine in oil (Santa Cruz County)	E. F. Sager	Santa Cruz	\$4 00
Wine shams	Mrs. J. Monon	Santa Cruz	\$1 00
Wine	W. Galven	Santa Cruz	\$4 00
Wine	Mrs. H. E. Cox	Santa Cruz	\$3 00
Wine	Mrs. H. E. Cox	Santa Cruz	\$3 00
Wine	Mrs. E. Perry	Santa Cruz	\$3 00
Wine	Mrs. E. Perry	Santa Cruz	\$3 00
Wine	D. W. Thompson	Santa Cruz	\$1 00
Wine	D. W. Thompson	Santa Cruz	\$4 00
Wine	Polly Dutton	Santa Cruz	\$2 00
Wine	Mrs. A. E. Dutton	Santa Cruz	\$4 00
Wine	Cora Skinner	Santa Cruz	\$4 00
Wine	Cora Skinner	Santa Cruz	\$3 00
Wine	Anna Bias	Santa Cruz	\$7 00
Wine	Mrs. A. Mann	Santa Cruz	\$3 00
Wine	Mrs. A. Mann	Santa Cruz	\$3 00
Wine	Helen Stevens	Santa Cruz	\$3 00
Wine	Helen Stevens	Santa Cruz	\$2 00
Wine	Effie Fields	Santa Cruz	\$3 00
Wine	S. E. Green	Santa Cruz	\$3 00
Wine	S. E. Green	Santa Cruz	\$3 00
Wine	S. E. Green	Santa Cruz	\$3 00
Wine	Mrs. F. O. Hihn	Santa Cruz	\$1 00
Wine	Mrs. D. V. Wilder	Santa Cruz	\$3 00
Wine	Mrs. L. L. Fargo	Santa Cruz	\$2 00
Wine	Mrs. Buchanan	Santa Cruz	\$3 00
Wine	Mrs. Buchanan	Santa Cruz	\$3 00
Wine	Mrs. P. B. Fagen	Santa Cruz	\$2 00
Wine	Mrs. P. B. Fagen	Santa Cruz	\$2 00
Wine	Mrs. Martha Wilson	Santa Cruz	\$3 00
Wine	Mrs. Buchanan	Santa Cruz	\$3 00
Wine	Mrs. J. S. Mattison	Santa Cruz	\$3 00
Wine	Mrs. Buchanan	Santa Cruz	\$1 00
Wine	Mrs. Buchanan	Santa Cruz	\$3 00
Wine	Mrs. Mary Douglas	Santa Cruz	\$4 00
Wine	Mrs. C. McKenzie	Santa Cruz	\$3 00
Wine	Mrs. F. O. Hihn	Santa Cruz	\$2 00
Wine	Mrs. C. McKenzie	Santa Cruz	\$2 00
Wine	Mrs. C. McKenzie	Santa Cruz	\$3 00
Wine	Mrs. C. McKaskill	Santa Cruz	\$1 00
Wine	Mrs. A. P. Swanton	Santa Cruz	\$2 00
Wine	Mrs. A. P. Swanton	Santa Cruz	\$3 00
Wine	Mrs. A. P. Swanton	Santa Cruz	\$3 00
Wine	Mrs. A. P. Swanton	Santa Cruz	\$3 00
Wine	Mrs. A. P. Swanton	Santa Cruz	\$3 00
Wine	Mrs. O. J. Lincoln	Santa Cruz	\$3 00

EIGHTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Crochet lace	Mabel Lincoln	Santa Cruz
Goose down hand screen	Mrs. C. Hamlin	Santa Cruz
Silk quilt	Fannie Loomis	Santa Cruz
Crochet work	Mrs. R. M. Wood	Santa Cruz
Rag carpet	Mrs. R. M. Wood	Santa Cruz
Braided hearth rug	Mrs. R. M. Wood	Santa Cruz
Drawn rug	Mrs. R. M. Wood	Santa Cruz
Spanish work	Mrs. G. Mangenberg	Santa Cruz
Tapestry work	Mrs. G. Mangenberg	Santa Cruz
Hearth rug	Mrs. G. Mangenberg	Santa Cruz
Plain hand sewing	Mrs. H. Forbes	Santa Cruz
Silk embroidery on flannel	Mrs. H. Forbes	Santa Cruz
Silk embroidery	Mrs. H. Forbes	Santa Cruz
Crochet shawls	Mrs. H. Forbes	Santa Cruz
Lambrequin	Mrs. H. Forbes	Santa Cruz
Knitted skirt	Mrs. H. Forbes	Santa Cruz
Outline embroidery	Mrs. H. Forbes	Santa Cruz
Tatting	Mrs. H. Forbes	Santa Cruz
Showcase of fancy work	Mrs. H. Forbes	Santa Cruz
Fine chenille work	May Forbes	Santa Cruz
Embroidery on velvet	May Forbes	Santa Cruz

NINTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
FLOWERS.		
Bouquet	Thomas Thompson	Santa Cruz
Floral design	Thomas Thompson	Santa Cruz
Exhibit of plants	Thomas Thompson	Santa Cruz
Exhibit of cut flowers	Thomas Thompson	Santa Cruz
Ten varieties roses	Thomas Thompson	Santa Cruz
Ten varieties chrysanthemums	Thomas Thompson	Santa Cruz
Pansies	Enoch Alzina	Santa Cruz
Bouquets	Mrs. Wakeman	Santa Cruz
Three hundred and fifty varieties cut flowers	Mrs. Wakeman	Santa Cruz
Ten varieties pansies	Mrs. Wakeman	Santa Cruz
Carnations	Mrs. Wakeman	Santa Cruz
Sixty-five varieties pot plants	Mrs. W. H. Miller	Santa Cruz
Pot plants	Mrs. R. M. Wood	Santa Cruz
Design of flowers	Bessie W. Boston	Santa Cruz
Basket of pink roses	Bessie W. Boston	Santa Cruz
Table of cut flowers	"Juvenile Five"	Santa Cruz
Bouquet of pansies	A. E. Curtis	Santa Cruz
Ten varieties fuchsias	Mrs. P. B. Fagen	Santa Cruz
Ten varieties geraniums	Mrs. P. B. Fagen	Santa Cruz
Floral design	Mrs. R. M. Wood	Santa Cruz
Floral design	Mrs. R. M. Wood	Santa Cruz
Ten varieties chrysanthemums	A. Noble	Soquel
Ten varieties gladiolus	A. Noble	Soquel
Exhibit of fuchsias	A. Noble	Soquel
Assortment of verbenas	A. Noble	Soquel

TENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CULINARY.			
.....	Mrs. E. Whitcomb	Soquel	.....\$3 00
.....	Mrs. A. E. Curtis	Santa Cruz	.....\$1 00
.....	Mrs. A. Mann	Santa Cruz	.....\$3 00
.....	Maggie Campbell	Santa Cruz	.....\$2 00
.....	Maggie Campbell	Santa Cruz	.....\$2 00
.....	Mrs. Wakeman	Santa Cruz	.....\$1 00
.....	Tiny Briody	Santa Cruz	.....\$3 00

TRANSACTIONS

OF THE

TEENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of San Luis Obispo.

REPORT.

SAN LUIS OBISPO, December 1, 1890.

OFFICERS OF THE ASSOCIATION.

E. W. STEELE Pres
J. H. BARRETT Sec
R. E. JACK Treas

J. H. BARRETT,
Secretary.

DIRECTORS.

L. M. WARDEN San Luis Obispo
E. W. STEELE San Luis Obispo
J. H. HOLLISTER San Luis Obispo
J. V. WEBSTER San Luis Obispo
GEORGE VAN GORDON San Luis Obispo
J. P. ANDREWS Santa Maria
P. W. MURPHY Arroyo Grande
E. LEEDHAM Arroyo Grande

Honorable the State Board of Agriculture:

MEMBERS: The Directors of the Sixteenth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

RECEIPTS AND EXPENDITURES.

Receipts.

Balance on hand last report.....	\$887 86
Admission of privileges.....	440 00
Admission for races.....	583 00
Admission from Pavilion.....	553 10
Admission from Park.....	1,308 50
Admission warrant.....	2,250 00
	<u>\$6,022 46</u>

Expenditures.

Salaries paid.....	\$1,879 00
Salaries paid.....	940 00
Salaries paid.....	203 00
Salaries paid, 1889.....	566 84
Salaries for medals.....	90 00
Salaries paid, 1889.....	106 80
Salaries Trotting Association.....	21 00
Salaries Pavilion.....	274 86
Salaries.....	168 75
Salaries Park, 1890.....	570 00
Salaries paid.....	265 25
Secretary's salary.....	150 00
Shoe.....	35 00
Oil.....	20 00
Feed straw.....	89 50
Feeding and advertising.....	238 41
Feeding track in order.....	36 00
Freight, expressage, and freight.....	58 40
Gatekeepers, ticket sellers, and police.....	188 00
Grass.....	17 50
Items of expense.....	83 59
	<u>20 56</u>
	<u>\$6,022 46</u>

ANNUAL ADDRESS.

By REV. F. D. MATHER.

MR. PRESIDENT, LADIES AND GENTLEMEN: I esteem it an honor to address this large assemblage of representatives of the oldest, greatest, noblest, and most important industry in the world. When I think of the oldest industry, I am mindful of the fact that the first man who lived and toiled in this world began his career of activity as a farmer, a culturist, but, through his wife's influence, becoming specially interested in pomological investigations, by an unwise venture in fruit, he lost his Edenic possessions, and was compelled to fight weeds, thistles, and the remainder of his life. His eldest son was a farmer, and was successful in tilling the soil than in cultivating his own disposition. His second son was proprietor of a stock ranch. The first great industry of the world had previously been a preacher, shipbuilder, and navigator, which occupations he abandoned, after a most remarkable and successful career, for the more congenial pursuit of agriculture. All begin with our ancient ancestor Noah! Job, who lived in the gray dawn of human history, was a large land owner, and was rich in cattle, sheep, and camels. Abraham and Lot, Isaac, Jacob, and Laban were all engaged in agriculture.

I refer to agriculture as the greatest industry, for the reason that more people are engaged in it than in any other. I call it the greatest industry, because he who is engaged therein is in partnership with the soil, who impregnated the soil with fertility, and ordained the laws of production and growth. And it is the most important industry, by reason of the fact that it is at the foundation of all material growth and prosperity. It is the farmer who furnishes the great bulk of the food for the support of the world, and thus keeps the anvils ringing, the forges glowing, the spindles whirling, the looms clattering, the saws buzzing, the steamships plying, and the steamships plying. All other industries are largely dependent upon agriculture for their continuance and prosperity. The prosperity of the farmer means general prosperity. Failure of crops throughout a large section of country depresses every other industry and causes "hard times."

Farming, too, is the most independent of all occupations. I am aware that many farmers are having a hard struggle to get on. They can scarcely make both ends of the year meet. Their money is constantly on the grindstone. The taxes and interest on the mortgage, the scanty returns for their toil in many instances after they have done the best they could, and the low prices for which they are compelled to sell their products, combine to make them feel that their occupation is simply a wearisome treadmill, that their vocation is a curse, and that it is better to be anything rather than a farmer. I am sure that during the past year or two our papers have contained many articles concerning the unprofitableness of agriculture and the failure of agriculturists. With the knowledge that there is

action for many of the statements in said articles, I still maintain that the farmer, generally speaking, is the most independent person in the world.

He is more independent because on a more solid foundation, one that cannot destroy, commercial disaster cannot ruin, and financial depression cannot dissolve; a foundation that is as lasting as time itself, and will endure until the final crash of worlds. He is the most independent, because while he eats, and rests, and sleeps, his silent partners, the sun, the moon, the dew, and rain, and hidden forces of nature, are all at work in his interests, carrying forward his undertakings to their ultimate consummation.

He is the most independent, because more than in any other occupation he is his own master. He is the most independent, because he raises, and ought to raise, the principal part of what is required for the maintenance of himself and family.

He is the most independent because he has, or certainly by wise management may have, more time for rest and recreation, for social pleasures, and for the cultivation of the mind than those engaged in other industries. And so, to-night, I congratulate you, my agricultural friends, that you are agriculturists. But I would not have you think of your vocation as affording to you a life of only roseate, gratifying, and remunerative experiences. I know it is better than that, as well as you do. I know that success is not for you only as the result of hard toil, and in many instances success is the result of conflict. But conflict is the common lot of man, and toil is a necessary part of life. Without conflict there cannot be the joy of conquest, the joy of triumph, the happiness of victory. I know what that is. I know that my proudest achievements and most joyous experiences were those of success for two years in succession in beating all my neighbors at the garden. It was my ambition to have the best garden, the earliest ripening, and the largest yield in the entire community. And I did it. I used to get up at four o'clock in the morning to run my Planet, and I made me sweat. It made me puff. But I said, "I'll beat 'em and I did. Occasionally in my pastoral visitations, some farmer would look pride in his garden and worked it with his own hands would go through it with a great deal of satisfaction, saying, as he called to various productions, "Isn't that fine? Did you ever see such a garden?" When I praised his skill and neatness and success, he would feel real good. And I would keep thinking, "Just wait until I show you in town, and I will show you that there is one garden that is yours." Then I would watch for him, and when he came to town I would show him pretty soon, and he had an invitation to go and look at my garden. He wouldn't look long before saying, "If I had known about your garden I wouldn't have shown you mine." Then somebody else would say, "I'm good; somebody else was proud then; somebody felt about seven pounds, and as though he weighed but a few ounces, scarcely touching the ground as he walked."

There is only there joy and satisfaction in success, but there is joy in the toil that insures it.

The farmer, or gardener, or fruit grower, or stock breeder who is the most successful is the one who devotes to his business his best thought, his skill, closest attention, and most painstaking labor. His place is in the field, where seed has been planted or trees set out.

His fences are not in a condition of general dilapidation. His implements are not left in the field from season to season, to rapid destruction for want of care and shelter. His buildings have a forlorn and generally run-down appearance. His cattle are of the kind that look as though they might have been bred for the course. His horses are not old spavined hacks or California runts. His hogs are not obliged to "root hog or die." His wife and children are not overworked and underfed, and scantily clothed, because the orchard does not pay. He does not spend more money in the orchard than he does in the grocery, dry goods, and hardware stores. He does not spend more time in town loafing and gasing about political probability of a great influx of tenderfeet when the gap is closed, the possibility of a boom, etc., than he does in working his farm, cultivating his orchard, or looking after his stock. He does not think money, month after month, and year after year into the rapacious hands of that New Orleans octopus, the Louisiana State Lottery Company. He understands the fact that neither a sluggard nor a spendthrift can farm for pay. He is aware that an investment of brains is now as good as an investment of muscle, and the bigger the investment the better. He realizes that a few dollars of brains are often worth tons of muscle. He knows that his success requires as thorough a devotedness upon his part as the merchant, manufacturer, or skilled laborer must give to his. Though the conditions of success are sometimes hard, he feels that they are inevitable and he manfully meets them. The obstacles are overcome, the difficulties are surmounted, the golden prize is at last within his grasp.

Not long ago I visited an orchard in which the trees were burdened with their luscious loads. The soil was thoroughly pulverized, and that it had been faithfully cultivated. Everything was neat and alive. All the tools, implements, machinery, and wagons not in use were stored in sheds. I noticed that even the fruit and egg boxes were housed. The buildings presented a general appearance of thrift. The front of the house was a fine lawn. In a side yard were roses, and vines. The house itself, though unpretentious, was suggestive of comfort. It seemed homelike. It was, indeed, a home. Within were music, pictures, books, magazines, and papers. The furniture was used rather than for show; just the kind we would expect to find in such surroundings. The whole place told of comfort, happiness, and contentment. As I enjoyed the social atmosphere of that home, I partook of the generous hospitality of its inmates, I regarded the head of that family as a wise man, and his helpmeet as a prudent woman. I thought, "O, happy children, what blessings are yours! How glad you will be some day that you had such a father and such a mother! And when old age comes to you, and your hair is gray and your forms are bent, recollections of father and mother and your childhood home will be inexpressibly sweet to you."

Since writing the preceding part of this address I visited the place again this afternoon, and as I looked at this wonderful, elegant, attractive, magnificent display of fruits, flowers, vegetables, cereals, etc., I said to myself: "Many of my words will be wasted on the audience who cannot hear them, so far as stimulating them to greater endeavor is concerned, for they have gone to the very limit, beyond which it is not possible to go." And so it must appear to one unacquainted with the possibilities of this soil and climate. While it is doubtless true that the ex-

hibit represent the highest degree of perfection, it is no less true that they indicate what may be realized on thousands of acres of unimproved land, and, in many instances, now comparatively worthless land. It is that the transforming touch of civilization, whereby the wilderness, and deformities of nature are transformed into Edenic beauty, and fruitfulness—the desert being made to blossom as the rose—has only been felt on here and there a patch of this western land; but wherever that touch has been felt there has been created the possibilities that are here. I am sure, from what I have seen of this remarkable section and from what my eyes behold tonight, that the time is not far distant when these valleys and all out rival in beauty and productiveness the vineyards of Eschol and the gardens of Engedi.

Members of the Sixteenth District Agricultural Association, I commend you on what you have done and are doing. You are engaged in noble work, and I trust are nobly prosecuting it. But while you are producing the peerless fruits, raising the immense squashes and growing the mammoth onions, beets, and cabbages, and breeding fine stock, are you as mindful as you ought to be of those things that appeal to the sense of beauty in man, and develops his esthetic sense? Are you simply endeavoring to avail yourselves of the main chance to secure a competency, and grasping after the almighty dollar for the sake of possessing it; or are you making success along this path a means to nobler ends? Are you causing your material prosperity to contribute to the elevation of the home and community, and to flow out through channels of benevolence for the blessing of all?

Now, I would like to allow me to urge upon you the importance of thoroughness in the advancement of your interests: for the advertising of your products, for the advancement of the right kind of immigration. I would I urge you to stand as a unit for the casting out of the elements of darkness that ruin individual character, blight the prosperity of your city and county. With "Success" as your motto, and "I will do my very best to deserve it" for your guiding principle, you cannot entirely fail in your chosen pursuit, nor in the purposes of life.

Thanking you for your kind attention, I bid you all godspeed and

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBREDS—STALLIONS.		
Othello, three years old and over.....	E. R. Den.....	Santa Barbara
Consuelo, three years old and over.....	E. R. Den.....	Santa Barbara
CLASS II—STANDARD AND REGISTERED STALLIONS.		
Alpheus Wilkes.....	H. D. Albright.....	San Luis Obispo.
Monroe.....	Brown & Taylor.....	San Luis Obispo.
MARES.		
Miss Monroe, three years old and over.....	Brown & Taylor.....	San Luis Obispo.
Alta, three years old and over.....	J. H. Hollister.....	San Luis Obispo.
Prediction, suckling colt.....	J. H. Hollister.....	San Luis Obispo.
CLASS III—ROADSTERS—STALLIONS.		
Magic, three years old and over.....	H. D. Albright.....	San Luis Obispo.
Plow Boy, three years old and over.....	P. Donahue.....	Edna
Parnell, two years old.....	C. L. Woods.....	San Luis Obispo.
Cloud King, two years old.....	C. L. Woods.....	San Luis Obispo.
—, one year old.....	H. D. Albright.....	San Luis Obispo.
—, one year old.....	A. H. Fitzwater.....	San Luis Obispo.
MARES.		
Gold Dust, three years old and over.....	J. H. Orcutt.....	San Luis Obispo.
Stella C, three years old and over.....	E. W. Steele.....	Edna
Bijou, one year old.....	H. D. Albright.....	San Luis Obispo.
Blanche L, suckling colt.....	E. W. Steele.....	Edna
MATCHED TEAMS.		
Charlie and Billy.....	H. M. Warden.....	San Luis Obispo.
SINGLE ROADSTERS.		
Arabian.....	John Wear.....	Paso Robles.
CLASS IV—DRAFT HORSES—STALLIONS.		
Pride, three years old and over.....	H. D. Albright.....	San Luis Obispo.
MARES.		
Sallie, three years old and over.....	E. W. Steele.....	Edna
Mary, two years old.....	James Clausen.....	San Luis Obispo.
Suckling colt.....	E. W. Steele.....	Edna
CLASS V—CARRIAGE HORSES.		
Carriage team.....	E. W. Steele.....	Edna
Powder and Shot.....	Brown & Taylor.....	San Luis Obispo.
CLASS VI—HORSES FOR ALL PURPOSES—STALLIONS.		
Crown Prince, eight years old.....	E. W. Steele.....	Edna
Dodger, three years old and over.....	H. C. Petty.....	San Luis Obispo.
MARES.		
Maggie, three years old and over.....	E. W. Steele.....	Edna
Daisy N, three years old and over.....	H. C. Petty.....	San Luis Obispo.
—, two years old.....	E. W. Steele.....	Edna

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
COLTS.			
colt.....	E. W. Steele.....	Edna	\$3 00
colt.....	E. W. Steele.....	Edna	\$2 50
colt.....	H. C. Petty.....	San Luis Obispo.	\$2 50
CLASS VII—SADDLE HORSES.			
.....	John Scott.....	Paso Robles.	\$5 00
.....	William Graves.....	San Luis Obispo.	\$2 50
CLASS IX—JACKS.			
.....	W. C. Archer.....	Josephine.	\$7 50
CLASS I—DUBHAMS—COWS.			
years old and over.....	Orcutt & Taylor.....	San Luis Obispo.	\$7 50
between one and three years old.....	Bierer Bros.....	Templeton	\$5 00
.....	Orcutt & Taylor.....	San Luis Obispo.	\$2 50
CLASS II—JERSEYS—BULLS.			
years old and over.....	Bierer Bros.....	Templeton	\$10 00
years old and over.....	E. W. Steele.....	Edna	\$5 00
years old.....	Bierer Bros.....	Templeton	\$5 00
year old.....	Bierer Bros.....	Templeton	\$2 00
COWS.			
years old and over.....	Bierer Bros.....	Templeton	\$7 50
years old and over.....	E. W. Steele.....	Edna	\$5 50
over one year old and under.....	J. H. Orcutt.....	San Luis Obispo.	\$5 00
.....	Bierer Bros.....	Templeton	\$2 50
CLASS VII—HOLSTEINS—BULLS.			
years old and over.....	E. W. Steele.....	Edna	\$10 00
years old and over.....	E. W. Steele.....	Edna	\$5 00
years old.....	E. W. Steele.....	Edna	\$5 00
years old.....	E. W. Steele.....	Edna	\$2 50
year old.....	E. W. Steele.....	Edna	\$2 50
year old.....	E. W. Steele.....	Edna	\$2 00
COWS.			
years old and over.....	E. W. Steele.....	Edna	\$7 50
years old and over.....	E. W. Steele.....	Edna	\$5 50
over one year old and under.....	E. W. Steele.....	Edna	\$5 00
one year.....	E. W. Steele.....	Edna	\$2 50
CLASS VII—HERDS.			
steins.....	E. W. Steele.....	Edna	\$10 00
neys.....	Bierer Bros.....	Templeton	\$10 00
POULTRY.			
White Leghorns.....	Mickie Newsom.....	Arroyo Grande.	\$2 50
Brown Leghorns.....	Mickie Newsom.....	Arroyo Grande.	\$2 50
Plymouth Rocks.....	Mickie Newsom.....	Arroyo Grande.	\$5 00
Trakin ducks.....	Mickie Newsom.....	Arroyo Grande.	\$2 50
any.....	Mickie Newsom.....	Arroyo Grande.	\$2 00
oultry.....	Mickie Newsom.....	Arroyo Grande.	\$5 00
.....	J. C. Stocking.....	Morro	\$5 00
.....	Mrs. Huxley.....	Arroyo Grande.	\$5 00

SECOND DEPARTMENT.

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—ORCHARD AND VINEYARD.			
General display of products from one orchard.	E. Leedham	Arroyo Grande.	
General display of products from one orchard.	J. V. N. Young	Arroyo Grande.	
General display of products from one orchard.	Geo. H. Andrews	San Luis Obispo.	
General display of grain from one farm.	J. V. Webster	Creston	
General display of products from one vineyard.	Geo. H. Andrews	San Luis Obispo.	
General display of products from one vineyard.	P. H. Dallidet	San Luis Obispo.	
General display of products from one vineyard.	Wm. Ernst	Creston	
Display of vegetable products from one farm.	J. V. N. Young	Arroyo Grande.	
Display of vegetable products from one farm.	E. Leedham	Arroyo Grande.	
Display of vegetable products from one farm.	E. W. Steele	Edna	
Display of apples grown on one farm.	J. V. N. Young	Arroyo Grande.	
Display of apples grown on one farm.	E. Leedham	Arroyo Grande.	
Display of apples grown on one farm.	A. York	Templeton	
Single variety of apples.	A. M. Kurtz	San Luis Obispo.	
Yellow Newtown Pippin apples.	J. V. N. Young	Arroyo Grande.	
Display of Bellflower apples.	J. Gregory	San Luis Obispo.	
Display of Gravenstein apples.	E. Leedham	Arroyo Grande.	
Display of Thompson Co. King apples.	E. Leedham	Arroyo Grande.	
Display of Ben Davis apples.	A. M. Kurtz	San Luis Obispo.	
Display of pears raised in one orchard.	E. Leedham	Arroyo Grande.	
Display of pears raised in one orchard.	Geo. H. Andrews	San Luis Obispo.	
Display of pears raised in one orchard.	Wm. T. Sheid	Starkey	
Single variety of pears.	J. V. N. Young	Arroyo Grande.	
Display of Bartlett pears.	E. Leedham	Arroyo Grande.	
Display of peaches raised in one orchard.	J. V. N. Young	Arroyo Grande.	
Display of peaches raised in one orchard.	J. V. Webster	Creston	
Single variety of pears.	R. Rainey	San Luis Obispo.	
Display of nectarines.	E. M. Carr	Adelaide.	
Display of prunes.	E. Leedham	Arroyo Grande.	
Display of prunes.	J. V. N. Young	Arroyo Grande.	
Single variety of prunes.	E. M. Carr	Adelaide.	
Single variety of plums.	H. Hess	Arroyo Grande.	
Display of quinces.	E. Leedham	Arroyo Grande.	
Display of oranges.	J. P. Andrews	San Luis Obispo.	
Display of oranges.	E. Leedham	Arroyo Grande.	
Display of lemons.	Mrs. S. Langlois	Morro	
Display of lemons.	J. P. Andrews	San Luis Obispo.	
Artistic display of fruit.	J. V. Webster	Creston	
Display of blackberries.	J. S. Rice	Arroyo Grande.	
Display of figs.	J. V. N. Young	Arroyo Grande.	
Display of English walnuts.	J. P. Andrews	San Luis Obispo.	
Display of almonds.	J. P. Andrews	San Luis Obispo.	
General exhibit of dried fruits.	E. W. Steele	Edna	
General exhibit of dried fruits.	W. H. Findley	Arroyo Grande.	
Sun-dried fruit.	Mrs. H. Hess	Arroyo Grande.	
Amber sugar cane.	William Ernst	Creston	
CLASS II—AGRICULTURAL PRODUCTS.			
Sample of wheat, in sheaf.	J. V. Webster	Creston	
Sample of barley, fifty pounds or over.	W. B. McKennon	Chorro	
Sample of barley, in sheaf.	J. V. Webster	Creston	
Sample of oats, fifty pounds or over.	W. B. McKennon	Chorro	
Sample of oats, in sheaf.	Irwin Gruenhagen	Creston	
Sample of wild oats.	Irwin Gruenhagen	Creston	
Sample of evergreen millet.	William Ernst	Creston	
King Philip corn.	E. C. Watkins	San Luis Obispo.	
Sweet corn.	W. B. McKennon	Chorro	
Egyptian corn.	E. C. Watkins	San Luis Obispo.	
Pampas grass.	J. V. N. Young	Arroyo Grande.	
CLASS III—VEGETABLES.			
.....	George O. Taylor	Arroyo Grande	\$5 00
.....	A. M. Kurtz	San Luis Obispo.	\$3 00
.....	C. B. Granger	Starkey	\$5 00
.....	George H. Andrews.	San Luis Obispo.	\$3 00
.....	J. V. N. Young	Arroyo Grande	\$2 00
.....	E. Leedham	Arroyo Grande	\$1 00
.....	J. V. N. Young	Arroyo Grande	\$2 00
.....	J. V. N. Young	Arroyo Grande	\$2 00
.....	E. Leedham	Arroyo Grande	\$2 00
.....	J. V. N. Young	Arroyo Grande	\$2 00
.....	E. W. Steele	Edna	\$2 00
.....	E. Leedham	Arroyo Grande	\$2 00
.....	J. S. Brooks	Arroyo Grande	\$2 00
.....	George H. Andrews.	San Luis Obispo.	\$2 00
.....	J. S. Brooks	Arroyo Grande	\$2 00
.....	J. S. Brooks	Arroyo Grande	\$2 00
.....	George H. Andrews.	San Luis Obispo.	\$2 00
.....	J. S. Brooks	Arroyo Grande	\$1 00
.....	E. Leedham	Arroyo Grande	\$5 00
.....	J. V. N. Young	Arroyo Grande	\$2 00
.....	William Ernst	Creston	\$2 00
.....	J. V. N. Young	Arroyo Grande	\$2 00
.....	J. V. Webster	Arroyo Grande	\$2 00
.....	William Ernst	Creston	\$2 00
COUNTY PRODUCTS.			
.....	J. C. Tanner	Morro	\$5 00
.....	N. Stewart	Cayucos	\$3 00
.....	A. B. Hasbrouk	Huasna	\$3 00
.....	M. P. Freer	Pismo	\$2 00
.....	Mrs. J. C. Stocking	Morro	\$2 00
.....	N. W. Palmer	Huasna	\$2 00
.....	Sinsheimer Bros.	San Luis Obispo.	\$2 00
CLASS IV—BREAD.			
.....	Mrs. W. B. McKennon	Morro	\$2 50
.....	Mrs. L. J. Perrins	Morro	\$5 00
FLOWERS AND PLANTS.			
.....	E. Leedham	Arroyo Grande	\$5 00
.....	J. S. Brooks	Arroyo Grande	\$3 00
.....	L. H. Bickford	San Luis Obispo.	\$2 00
.....	J. S. Brooks	Arroyo Grande	\$2 00
.....	L. H. Bickford	San Luis Obispo.	\$2 00
.....	E. Leedham	Arroyo Grande	\$2 00
.....	Mrs. B. Sinsheimer	San Luis Obispo.	\$2 00
.....	Mrs. L. H. Bickford	San Luis Obispo.	\$1 00
.....	W. C. T. U.	San Luis Obispo.	\$2 00
.....	Mrs. R. S. Brown	San Luis Obispo.	\$2 00
NATIVE WINES.			
.....	P. H. Dallidet	San Luis Obispo.	\$7 00
.....	J. V. Webster	Creston	\$5 00
.....	P. H. Dallidet	San Luis Obispo.	\$5 00
.....	P. H. Dallidet	San Luis Obispo.	\$3 00
NEEDLE WORK, ETC.			
.....	Miss E. Wurch	San Luis Obispo.	\$2 00
.....	Miss Hersera	San Luis Obispo.	\$2 00
.....	Mrs. L. M. Franklin.	San Luis Obispo.	\$2 00
.....	Birdie Albright	San Luis Obispo.	\$2 00
.....	Sarah Leedham	Arroyo Grande.	\$2 00
.....	Mrs. M. Hanna	San Luis Obispo.	\$2 00
.....	Mrs. Bickford	San Luis Obispo.	\$2 00
.....	Mrs. H. Hess	Arroyo Grande.	\$2 00
.....	Miss M. Lowenstein.	San Luis Obispo.	\$2 00
.....	Mrs. Louisa Barra	San Luis Obispo.	\$2 00
.....	Miss E. Wurch	San Luis Obispo.	\$2 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
DRESSED MATRON.		
Best dressed matron.....	Mrs. John Whicher.	San Luis Obispo.
CLASS VII—FINE ARTS.		
Fruit painting.....	Minnie Neligan.....	Creston.....
Flower painting.....	Minnie Neligan.....	Creston.....
Pencil drawing.....	Georgia Neligan.....	Creston.....
Penmanship.....	H. C. Knight.....	San Luis Obispo.
Architectural drawing.....	H. S. Laird.....	San Luis Obispo.
CLASS VIII—MERCHANDISE.		
Brooms.....	Sinsheimer Bros.....	San Luis Obispo.
Saddle.....	Sinsheimer Bros.....	San Luis Obispo.
Castings.....	Smith & Ryan.....	San Luis Obispo.
Copperware.....	Bennett, Shackelford & Le Blanc.....	Paso Robles.....
Tinware.....	Bennett, Shackelford & Le Blanc.....	Paso Robles.....
Buckskin suit.....	N. W. Palmer.....	Huasna.....
Blacksmith work.....	C. A. Younglove.....	San Luis Obispo.
Jellies.....	Mrs. J. C. Stocking.....	Morro.....
Jellies.....	Mrs. H. M. Warden.....	San Luis Obispo.
Jellies.....	Miss Annie Wright.....	San Luis Obispo.
Catsup.....	Mrs. J. C. Stocking.....	Morro.....
Pickled fruits.....	Mrs. J. C. Stocking.....	Morro.....
Vegetables in jars.....	Mrs. W. B. McKennon.....	Chorro.....
Dried fruits.....	W. H. Findley.....	Arroyo Grande.
Dried prunes.....	Mrs. H. Hess.....	Arroyo Grande.
Furniture upholstering.....	D. A. Cortesi.....	San Luis Obispo.
CLASS IX—BABIES.		
Largest baby.....	Mrs. Shively.....	Creston.....
Next largest baby.....	Mrs. E. O. Steiner.....	San Luis Obispo.
Prettiest baby under six months.....	Mrs. A. E. Ash.....	San Luis Obispo.
Next prettiest baby under six months.....	Mrs. Geo. Wilson.....	Creston.....
Prettiest baby under twelve months.....	Mrs. A. Faeh.....	San Luis Obispo.
CLASS X—DISPLAY OF MERCHANDISE FROM STORES.		
General display of merchandise.....	Bennett, Shackelford & Le Blanc.....	Paso Robles.....
Hardware.....	Simmons & Hall.....	San Luis Obispo.
Furniture.....	Goldtree Bros. & Co.....	San Luis Obispo.
Books and stationery.....	J. A. Goodrich.....	San Luis Obispo.
Crockery and glassware.....	Bennett, Shackelford & Le Blanc.....	Paso Robles.....
Foundry work.....	Horace Bickford.....	San Luis Obispo.
Dry goods.....	A. Crocker & Bros.....	San Luis Obispo.
Fancy goods.....	A. Crocker & Bros.....	San Luis Obispo.
Clothing.....	A. Crocker & Bros.....	San Luis Obispo.
Guns and sporting articles.....	Simmons & Hall.....	San Luis Obispo.
Paints and oils.....	J. A. Goodrich.....	San Luis Obispo.
Boots and shoes.....	Brown & McCann.....	San Luis Obispo.
FINAL CLASS.		
Point lace and crochet.....	Miss M. Bruns.....	Morro.....
Embroidery.....	Mrs. E. O. Steiner.....	San Luis Obispo.
Painting.....	R. S. Brown.....	San Luis Obispo.
Skeleton flowers.....	Miss M. Stocking.....	Morro.....
Infant's dress.....	Miss Minnie Corvea.....	San Luis Obispo.
Spanish worked handkerchief.....	Miss Pebro Flores.....	San Luis Obispo.
Fancy robe.....	Mrs. L. M. Franklin.....	San Luis Obispo.
Thread-lace fichu.....	Mrs. L. M. Franklin.....	San Luis Obispo.
Fancy shawl.....	Miss Belle Hendrick.....	San Luis Obispo.
Tatting work.....	Mrs. Sarah Leedham.....	Arroyo Grande.
Knitting work.....	Mrs. Sarah Leedham.....	Arroyo Grande.
Cucumbers.....	J. S. Brooks.....	Arroyo Grande.
Muskmelons.....	J. S. Brooks.....	Arroyo Grande.
Cauliflower.....	E. W. Steele.....	Edna.....
Apples.....	J. D. Fowler.....	Cayucos.....

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
work.....	G. O. Freeman.....	Cayucos.....	.....\$2 00
work.....	Minnie Netigan.....	Creston.....	.....\$2 00
work.....	E. Leedham.....	Arroyo Grande..	.....\$2 00
work.....	J. S. Brooks.....	Arroyo Grande..	.....\$1 00
work.....	Mrs. Spurgeon.....	San Luis Obispo.	.....\$2 00
work.....	G. W. Mighill.....	San Luis Obispo.	.....\$2 00
work.....	Jake Vetter.....	Oak Park.....	.....\$2 00
work.....	J. Gregory.....	San Luis Obispo.	.....\$2 00
work.....	W. H. Findley.....	Arroyo Grande..	.....\$2 00
work.....	A. B. Hasbrouk.....	Huasna.....	.....\$2 00
work.....	J. V. N. Young.....	Arroyo Grande..	.....\$2 00
work.....	E. Leedham.....	Arroyo Grande..	.....\$1 00
work.....	J. S. Brooks.....	Arroyo Grande..	.....\$1 00

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 2, 1890.

RACE No. 1—TROTTING.

Purse, one hundred and sixty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Monroe, by Monroe Chief.....	R. S. Brown.....	San Luis Obispo.
Dynamite, by Gaviota.....	Charles Woods.....	San Luis Obispo.
Sleepy Sam, by Quien Sabe.....	Charles Lee.....	San Luis Obispo.

SUMMARY.

Monroe.....	2 1 1 1
Sleepy Sam.....	1 2 3 2
Dynamite.....	dis.

Time—2:43½; 2:45; 2:43; 2:43½.

RACE No. 2—RUNNING.

Free for all. Purse, one hundred and fifty dollars. Three quarters of a mile and

Name and Pedigree of Horse.	By Whom Entered.	Address.
Moses B, by Lone Star.....	Moses Bryant.....	San Luis Obispo.
Consuelo, by Gaviota.....	E. R. Den.....	San Luis Obispo.

SUMMARY.

Moses B.....	1
Consuelo.....	2

Time—1:18; 1:18½.

RACE No. 3—RUNNING.

Purse, one hundred and fifty dollars. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sid Law, by Robbery Boy.....	E. R. Den.....	San Luis Obispo.
Mercedes, by Comanche.....	E. B. Hill.....	San Luis Obispo.
Othello, by Hock Hocking.....	E. R. Den.....	San Luis Obispo.

SUMMARY.

Sid Law.....	1
Othello.....	2
Mercedes.....	3

Time—0:51½; 0:51.

WEDNESDAY, SEPTEMBER 3, 1890.

RACE No. 4—TROTTING.

Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Mount Vernon.....	H. C. Petty.....	San Luis Obispo.
by Bashaw.....	H. Delaney.....	Santa Barbara.
by Diamond, by Altonia.....	E. P. Hamilton.....	Arroyo Grande.
by Diamond, by Altonia.....	W. S. Lyerly.....	Santa Maria.
by Duke McClellan.....	R. E. Tole.....	San Luis Obispo.

SUMMARY.

by Mount Vernon.....	2 1 1 1
by Bashaw.....	1 3 2 4
by Diamond.....	3 2 3 2
by Duke McClellan.....	4 4 4 3
by Duke McClellan.....	dis.

Time—2:41; 2:52½; 2:51; 2:55.

RACE No. 5—TROTTING.

Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by A. W. Richmond.....	H. Delaney.....	Santa Barbara.
by Van Voorhies.....	Ferguson & Hamilton.....	Arroyo Grande.
by Mambrino Wilkes.....	H. D. Albright.....	San Luis Obispo.
by Bashaw.....	Sloan De Nise.....	San Luis Obispo.

SUMMARY.

by A. W. Richmond.....	2 3 1 1 1
by Van Voorhies.....	4 1 2 4 4
by Mambrino Wilkes.....	3 2 3 2 2
by Bashaw.....	1 4 4 3 3

Time—2:34½; 2:32½; 2:32; 2:37½; 2:40.

THURSDAY, SEPTEMBER 4, 1890.

RACE No. 6—TROTTING.

Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Main.....	Chas. Lee.....	San Luis Obispo.
by Brilliant.....	Ed. Hamilton.....	Arroyo Grande.
by Newland's Hambletonian.....	John Wear.....	Paso Robles.

SUMMARY.

by Main.....	1 1 1
by Brilliant.....	2 2 2
by Newland's Hambletonian.....	3 3 3

Time—2:42; 2:40; 2:42.

RACE No. 7—RUNNING.

Purse, one hundred and fifty dollars. Half mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sid Law, by Robbery Boy	E. R. Den	Santa Barbara
Comet, by Robbery Boy	John Ferguson	Santa Barbara
Moses B, by Lone Star	Moses Bryant	Santa Barbara

SUMMARY.

Moses B	2 1 1
Comet	1 2 2
Sid Law	3 3 2

Time—0:51; 0:52; 0:52.

RACE No. 8—RUNNING.

For saddle horses. Purse, one hundred dollars. One quarter of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lathrop Belle	J. M. Ferguson	Santa Barbara
Lily B	Ramon Ybarra	San Luis Obispo
Go-as-You-Please	Jake See	San Luis Obispo
Little Casino	W. H. McNaughton	San Luis Obispo
Tobe	R. S. Brown	San Luis Obispo

SUMMARY.

Go-as-You-Please	3 1 1
Tobe	1 1 1
Lathrop Belle	2 2 2
Lily B	4 4 4
Little Casino	5 5 5

Time—0:25; 0:24; 0:25.

FRIDAY, SEPTEMBER 5, 1890.

RACE No. 9—TROTTING.

For yearlings. Purse, fifty dollars. One half mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Bijou, by Fred Arnold	Chas. Lee	San Luis Obispo
Billy Arnold, by Fred Arnold	Ed. Hamilton	Arroyo Grande

SUMMARY.

Bijou	.....
Billy Arnold	.....

Time—2:20; 1:42.

RACE No. 10—TROTTING.

Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Bashaw	H. Delaney	Santa Barbara.
by Quien Sabe	Chas. Lee	San Luis Obispo.
by Monroe Chief	R. S. Brown	San Luis Obispo.
by Brilliant	Ed. Hamilton	Arroyo Grande.

SUMMARY.

Bashaw	1 3 1 1
Quien Sabe	2 0 3 2
Monroe Chief	3 0 2 3
Brilliant	4 4 4 4

Time—2:42; 2:43½; 2:45; 2:40.

SATURDAY, SEPTEMBER 6, 1890.

RACE No. 11—TROTTING.

Purse, two hundred and fifty dollars. Association adds fifty dollars to those are driven inside of 2:30. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Van Voorhies	Ed. Hamilton	Arroyo Grande.
Nutwood, by Nutwood	P. J. Doyle	San Luis Obispo.
by Davis	R. S. Brown	San Luis Obispo.
by A. W. Richmond	H. Delaney	Santa Barbara.

SUMMARY.

Van Voorhies	2 1 1 1
Nutwood	1 2 2 2
Davis	3 3 3 3

Time—2:27½; 2:29½; 2:34; 2:33½.

RACE No. 12—RUNNING.

Purse, one hundred and twenty-five dollars. One mile and a quarter.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Robbery Boy	J. M. Ferguson	Santa Barbara.
pedigree unknown	J. M. Ferguson	Santa Barbara.
Robbery Boy	E. R. Den	Santa Barbara.
Lone Star	M. S. Bryant	Santa Maria.
pedigree unknown	J. See	San Luis Obispo.

SUMMARY.

at first quarter, Sid Law was first at second quarter, and Moses B was fourth, and fifth quarters.

TRANSACTIONS

OF THE

SEVENTEENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of Nevada.

OFFICERS OF THE ASSOCIATION.

M. L. MARSH.....

I. J. ROLFE.....

E. M. PRESTON.....

DIRECTORS.

M. L. MARSH.....

SAMUEL GRANGER.....

J. A. J. RAY.....

A. B. DRIESBACH.....

J. R. NICKERSON.....

GEORGE FLETCHER.....

C. H. MITCHELL.....

GEORGE F. JACOBS.....

REPORT.

NEVADA CITY, January 1, 1891.

Honorable the State Board of Agriculture:

MEMEN: The Directors of the Seventeenth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

I. J. ROLFE,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

From Supervisors of Nevada County	\$1,000 00
From State appropriation	2,000 00
From Directors' note at bank	1,000 00
From suspensions	123 80
From gate receipts at Park	1,263 25
From grand stand receipts	60 00
From hack badges	15 00
From exhibitors' badges sold at Park	18 00
From bar privilege at Park	550 00
From pool privilege at Park	173 35
From other privileges at Park	302 55
From entrance money saddle horse race	15 00
From door receipts at Pavilion	738 75
From exhibitors' badges at Pavilion	21 00
From privileges at Pavilion	30 00
From lumber sold	15 10

Expenditures.

For maintenance of stock grounds	\$657 00
For repairs of stock grounds	591 81
For insurance	124 20
For interest on purchase of stock grounds	270 00
For membership National Trotting Association	75 00
For printing and advertising	522 80
For stationery and postage	73 50
For Directors' note at bank	400 00
For interest on floating debt	130 50
For Geo. F. Jacobs' expenses to Marysville	20 00
For I. J. Rolfe, money advanced, 1889	12 33
For bill posting	8 00
For Secretary's salary	100 00
For music	240 00
For ribbon for badges and premiums	23 45
For expenses Directors and Judges	18 00
For expenses sending man to Sacramento	10 00
For sprinkling road	10 00
For hack for speaker	6 00
For purses	2,000 00
For premiums at stock grounds	312 00
For ladies' tournament	30 00
For sawdust, stock grounds	15 30
For straw, stock grounds	30 00
For ice, stock grounds	13 00
For entry clerk, stock grounds	20 00
For payroll, stock grounds	454 00
For rent of Pavilion	50 00
For cases for Pavilion	7 00
For lumber and preparing Pavilion for exhibits	43 17
For premiums at Pavilion	747 00
For gas at Pavilion	31 00
For Superintendent of Pavilion	50 00
For payroll of Pavilion	157 00

Balance on hand

Indebtedness.

Purchase of track	
Bills payable (R. McMurray)	
Bills payable (Directors' note at bank)	

Total

ANNUAL ADDRESS.

By REV. D. D. BOWMAN.

PRESIDENT, LADIES AND GENTLEMEN: Some time ago I was reached by a committee appointed by the Directors of this agricultural association, and asked to deliver the address on this occasion. The honest truth I had but a very vague conception of what an annual address was, and perhaps that is the reason why I consented to deliver this one. The Directors seemed to have some idea of the matter stood with me, and so they sent me several to read. I read them. They each and all began in about the same way. The members all said that what they were about to say would be unmerciful, and seemed to doubt whether or not the people would pay attention to them whatever. I don't know how they fared, but a majority of their addresses were really interesting, and should have been listened to, whether they were or not. I am perfectly aware that there are many interesting things to be seen here, but if you will give your attention but for a very little while, I give you full leave to look at the cabbage heads, pumpkins, and squashes, and do as much as you like afterwards. A majority of you are old residents of Nevada County, and many of you were born and reared here. At first I felt it presumption for me to undertake this address, but after considering the matter for a little time I thought that perhaps I might be able to render you some service by letting you see yourselves as others see you. I am very much afraid that with long residence here, away from the large centers of population, you have almost entirely escaped the really necessary vices of our civilization. First of all, I really think you are altogether too modest. Now, I know by personal experience what it is to suffer from that complaint, and so I am anxious to help you to get well of it by telling you some things about yourselves that you seem too modest to say. It has seemed to me ever since coming amongst you, about a year ago, that you really have not a high estimate of the grand county in which you live; and so perhaps the first thing for me to do is to devote the short time allotted to me to making that modest estimate and speak of some of your undeveloped, comparatively undeveloped, resources, and of the many natural beauties of this, really one of the grandest counties in all the great State of California.

When I first came to Nevada County, a little more than a year ago, I was led, from representations that had been made to me by people of different sections of the State, to find it a barren, rocky waste, with here and there a fertile little valley as a sort of oasis in the general desert of the surrounding country. In reply to my inquiries, made of some of the old timers, they told that Nevada County was only a mining county. That its mines were mainly exhausted, and that since the injunction on public mining the county was "played out." I was furthermore informed that farming did not pay, and that fruit raising was

overdone, and could not be conducted with profit anyhow. Then, my surprise upon finding on my arrival this magnificent county with its broad, fertile acres of comparatively level lands, its slopes of mountain sides, its waving fields of golden grain, its orchards and its vineyards laden with luscious fruits, its magnificent forests untouched by the lumberman's ax, its vast hydraulic mines but requiring the settlement of a little problem of engineering skill to set all into magnificent producers of bullion, and its quartz mines, with their magnificent records, but in the infancy of their development. All this was a revelation for which I was entirely unprepared, and I looked in wonder upon it all, the question arose, and why is it that the people of this coast and the people of the East know so very little of the wonderful resources of this wonderful county? Why, in the amount of advertising that has been done of California in the East, Nevada County shared so little? Why has not a portion of the stream of immigration that has passed, even through a portion of our own county, been kept here instead of being permitted to go on to territories where the soil is less fertile, the climate far less delightful, less healthful, the country less accessible, and in all respects less desirable a place of residence and homes than this? Why is it that these grants have passed through Nevada County and gone to these less desirable sections, and paid from \$50 to \$500 per acre for land where they might have secured better land, with superior market and irrigation facilities here, for from \$10 to \$30 per acre? Surely, for every reason there must be an adequate cause, and there is doubtless a cause.

First of all it is doubtless true that this county has never been advertised as its merits deserved. You have had local real estate agents that have been willing to show lands and sell them to parties who have their way into the county, but there has been no systematic and continued or continuous effort made to bring the merits of our part of California to the attention of immigrants to this coast, from either the East or from the Eastern States. While other counties of this State have advertised thoroughly all over the East the merits, real and imagined, of their particular sections, we have been so modest that we have even told them half the truth with reference to our county. Nevada County needs, above all else, an Immigration Association, and a competent agent or two in New York and several other large cities of the East. If only the merits of this section could become generally known to the people of the East who are seeking homes on this coast, her population would be doubled in five years, and quadrupled within the next ten. And you will excuse me when I say that I do not believe that the people of the citizens, and even some of the old citizens, of this county are alive to the resources and needs of their own section of the State. I am of the most pessimistic views, and some of the most discouraging concerning this county that I have ever heard advanced, were they made by some of its oldest inhabitants. We have some chronic growlers concerning whom the prayer of the old colored woman for her complaining husband would perhaps be the best that could be said: "Lawd, if dare's feddars enough left to make Unc' Sambo make him home and make him an angel." They might make good citizens. They certainly are of but little account in helping along the progress of the county. Some of them have had quartz in their hands for so long that they have almost turned to stone themselves.

need to have our eyes opened to the greatness and grandeur of this county, in order that we may properly recommend it to others. It is doubtless true that the fact that Nevada County was first of all a mining county has had much to do with the fact that it has as yet developed comparatively but little else. The fascination of your mines has been too much for the men who came here expecting to engage in other branches of business or industrial pursuits, and so your prospective agriculturist or horticulturist has developed almost in spite of himself. Wages have also been good in the mines, and many short-sighted men have felt that the three-dollar-a-day bird in the hand was worth more than the prospective fruit farm in the bush. In this computation the vision of the future farm house, with its neat white walls and green shutters, its cool veranda and comfortable furniture, its well stocked barns, its broad, sweeping meadows and grain fields, its orchards, all its magnificent orchards, loaded down with golden fruit, has not been permitted to cut any figure at all. If it had a great voice, your miners would have been farmers instead. And yet again, the fact that most abundantly demonstrated by past experience that in all countries the first leading industry opened will hold for many years in an exclusive sway. Other resources are practically ignored. Humboldt and Mendocino Counties, for instance, are lumber counties, and lumbermen went there. The men who first spoke of other resources were ignored, and it was only by dint of great effort and perseverance that a part of those who had faith in these other resources that they developed at all.

That is true of Humboldt as a lumber county is true of Nevada County. Mining has absorbed all the attention and all the resources of the people, and other resources and industries have been entirely dependent on this one principal industry. They have been subject to the fluctuations of the mining industry, and in fact have lived on that for their very life. But the time has come for a change. The time has come when such industries as agriculture and stock raising should assert their independence and strengthen themselves to stand alone. It has been said by some that farming does not pay in Nevada County. That statement ought not by any means to be allowed to pass unchallenged. There is no country on the surface of the globe where general produce farming pays as well as it does in Nevada County. Like the Idaho for instance, but there are other countries where farming pays, nevertheless, and Nevada County is one of those countries. I have but one thing to say in this address in regard to farming as it is generally carried on here, and that is from the standpoint of one who was bred a farmer, and who spent many years in the best farming districts of Ohio, Indiana, and Illinois, and who observed closely the methods in vogue in those great farming States. If farming in Nevada County has not paid in the past, it is not because she lacks in any of the natural conditions that concern the success of the country's success, but because of a non-application or misapplication of the proper methods of successful farming.

As to the matter from the standpoint of one familiar with the farming of the great farming States of the East, it has seemed to me that a majority of the farmers of this county, and in fact of the whole State, have made one great mistake in this that they are nearly all single crop farmers. Single crop farming never has been and never will be a

success. It has not been a success in Kansas in the corn district in Iowa nor in Illinois. I have seen it tried on wheat and other crops in Indiana in the fertile Wabash Valley, and it failed there. California will not prove to be an exception. Where all depends on some one crop, and that crop fails, or even if it be over abundant, the farmer suffers. In the one case he has nothing to sell, though there be all that could be desired, and in the other he has an abundance to sell, but the market is overstocked. The model farms of New York, Pennsylvania, Ohio, and Indiana are all general produce farms, and depend upon a variety of products. They raise wheat, corn, oats, potatoes, fruit, horses, cattle, hogs, and poultry; and each farmer has considerable dairying besides. Let any one of these things fail and the farmer falls back on all the remainder, and is injured but little. If one year be exceptionally bad for some one crop it is almost certain the next year will be exceptionally good for another; and so each year, if the farm be properly managed, may be a prosperous year, unless, of course, there be a general financial depression, in which case the farmer, of course, must take his chances with others. But even then he will suffer less than any other class. So long as the farmers of this county depend so largely upon one crop, hay, for instance, that long will we hear the cry that they don't pay. Whenever they begin to depend more upon a variety of products the farming interests of the county will begin to assume an air of prosperity such as they have never yet had. All the really prosperous farms in this county (and there are many of them) are of the latter kind, and they are a sure prophecy of what all might be if the owners were only wise. Farming does pay if carried on intelligently. It pays in all that which goes to make life enjoyable and desirable. The farmer may not stand as much chance of becoming a millionaire as the speculator in stocks or the owner of a stud of fast horses, but he is sure of a steady prosperity, that with proper management will insure him of a competence, and health and long life thrown into the bargain. And there is no county in the State that offers greater inducement to farmers than does Nevada County. Land is cheap; the water supply is inexhaustible; irrigation facilities are exceptionally good; the soil is surpassing richness; the climate is as nearly perfect as earth can be. What we need, and the one great thing we need to make this county one of the most prosperous in the State, is more farmers and more scientific farming.

But the one great industry, outside of mining, in which, of all our counties, Nevada County will most excel, will be in the production of fruit. Differences in soil, altitude, and general topography render it possible for us to produce in this county every variety of fruit that can be produced in the State anywhere, and to produce them in the greatest abundance and perfection. Oranges, peaches, pears, plums, nectarines, figs, prunes, quinces, apples, cherries, and all other, except tropical fruits, can be produced in this county, as the exhibit here before us most abundantly testifies. Our oranges are not inferior to those of any other section of the State, and all our other fruits are infinitely superior to those that can be produced in any other section save that of which Nevada County occupies a very prominent part. It has now become a recognized fact that California fruits are superior to any other fruit in America, and we are not unaware that there are carping critics who deny this statement, but now that they have become satiated with the ambrosial delights

of fruits and vineyards, declare that the fruit of California can never be surpassed by the fruits of the East; but, perhaps, if they brought to our minds the incomparable appetites which they took to those of their fathers, when, as boys, they were never happy until they had stowed beneath their waistcoats a half dozen rosy-cheeked apples, with a complement of other fruits, their judgment would be different. The farmers of the East, who have the fruits of all the different sections of the country side by side, are certainly the most competent judges, and they, with united voice, that California fruits are the best. Permit me, in support of that statement, to give you the testimony of one, personally well qualified to judge as any man in America. I refer to Mr. L. Goodsell, of New York City, one of the heaviest dealers in fruit in the country. He says of our fruits, with reference to the high prices paid for them:

"Prices of California fruits are higher than those grown near by, because the fruit is superior, and the fruit is properly graded and packed. Last year domestic pears were \$3 50 per barrel, while California Bartletts brought \$9 per barrel. Plums sold for \$3 per bushel, while California plums brought fully \$7 per bushel. The difference in price is most marked in peaches. It is a fact worthy of mention, however, that one day last season, when there was a large supply of Jersey and other peaches selling at \$1 50 per half bushel, as high as \$5 per box was bid on the market for California peaches, each box containing but five dozen, or a little less than

that. I submit it to your own judgment whether these prices themselves are not the very best argument as to the superior merits of our fruit. When California Bartlett pears sell for \$9 per barrel while eastern pears bring but \$3 50, when California plums bring \$7 50 while eastern plums bring but \$3 per bushel, when California peaches sell for more than six times as much as eastern peaches, is that not a sufficient evidence of the superiority of California fruits? And that fact is valuable to us not only as something to boast of, but it is valuable to us in securing us a permanent and inexhaustible market for our products. I said one fruit dealer to whom I wrote for information:

"Let your people be frightened out of fortunes in fruit by the bugbear cry of overproduction and over-supply. There can be no such thing as an over-supply of California fruits in the eastern market. There is a large and growing class of people that will have the very best there is, and California fruit is the very best. And there is nothing more in favor of California fruit, and that is that while it has to be shipped thousands of miles to its eastern market, it yet possesses such keeping properties, such that it reaches the eastern market in better condition than does their own fruit, and at a few hundred miles.

Goodsell, the gentleman whom I have already quoted, says on this point:

"A significant fact that fruits grown near by have not the life and keeping powers to them over three days after being picked. Fruit shipments are yet in their infancy, and as twenty-three hundred carloads, containing twenty thousand pounds each, shipped from California last year, and as the shipment will probably amount to one hundred and five hundred carloads this season, it will not be an exaggeration to say that in a few years the various markets in the East will be entirely supplied by California fruit.

Now what is true of California fruit in general is much more true of our mountain fruit in particular. In the eastern market, fruits from El Dorado, and Nevada Counties, or, generally speaking, the foothills of the Sierras, are invariably quoted at an advance of 50 cents per box upward over valley fruits, and the demand is

much greater than the supply ever will or can be, for the area of land in which this choice fruit can be produced is comparatively limited.

You are perhaps all aware that about a year ago our enterprising neighbors at Colfax organized a fruit union, and that they made shipments of fruit to the East. Hearing of this I wrote to Mr. Hayford, a gentleman well and favorably known to you all, for information, which information he very kindly furnished. With reference to the shipments last year, he said they had only shipped one carload of grapes, and that to New York, and that it netted them \$60 per ton. He continued:

Our fruit took the very front rank as to quality, and we had the pleasure of seeing Colfax grapes bulletined in New York, with great compliments by the wholesale trade for their fine flavor and high color, and firmness in standing the carrying, etc. We had frequent calls from the leading houses in New York, Chicago, and Boston, for our consignment to them of all our varieties of fruit, such as peaches, pears, and grapes for this season, willing to contract at prices much in advance of those offered for valley fruit. As you will readily perceive, our fruit is taking the lead, and the reputation of Placer and Nevada County fruit is being well established. We lack only quantity to make it desirable for the fruit buyers to swarm around, eager to take all that Nevada County will soon learn, and, in fact, she already knows, why she is lagging in not having large enough orchards, and in not producing enough fruit.

And yet, with all these facts before us, some of the people of our grand county are saying that fruit growing is not profitable. A limited acreage devoted to fruit culture in the county seems to indicate that we believe them, and so, closing our eyes, we dream of the good days of '49 and gold mining, and only arouse ourselves sufficiently to prospect a little occasionally for a quartz ledge.

Does fruit raising pay? Does it pay to raise grapes at from \$60 per ton net? That means at least an income of from \$200 per acre for your land. Suppose that a man has but a two-acre vineyard. It will thus produce from \$4,000 to \$5,000 worth of fruit annually. Peaches this year are selling for about \$80 per ton, which means, at ten tons per acre, about \$800 per acre. Bartlett pears are actually selling for as high as \$4 per box of forty pounds. At this point of the profitability of fruit raising, let me give you words from one of the most prominent fruit raisers on the coast, H. Hatch, of Suisun:

Every one who has fruit to sell will make money this year. I have now an acre of the peaches in my locality, regardless of color, at 3½ cents per pound, and I am getting 4 cents. Peaches sold at 4 cents means \$60 a ton, and fully \$600 per acre. I have ten boxes of forty pounds each to the tree, at \$4 a box. This means \$40 to the tree, or about \$3,000 per acre. I have one tree that last year yielded twenty-six boxes of Bartlett pears. That tree yielded me \$25 the first year I bought my place, yet for five years it has been fool enough not to plant more Bartlett pears. But there are many just as near me, for to-day many of my neighbors have no Bartlett pears. I am sure this year will average \$1,000 per acre.

It is not an open question at all as to whether fruit growing made to pay, and pay handsomely, in this county. Compare a yield of from \$250 to \$3,000 per acre with a yield of from \$10 to \$40 per acre, and the sums realized on eastern farms, and then ask yourself whether fruit raising in California pays. In the eyes of the New England farmer such an income would be simply princely. The difficulty with the Californians is, that they compare fruit growing and everything else with the gold mining of the days of '49 and '50, and unless they realize from \$25 to \$50 per day they are dissatisfied. He who

owns a hundred and sixty acres of good fruit land in Nevada County possesses more real certain wealth than the owner of a half dozen prospect-
quartz ledges, and he can develop his mine of wealth himself and with enhanced value to his descendants after him. We are justly proud of having within the limits of our county the greatest quartz mine in the world. Let us go on with our mining industries by keeping the old mines in ceaseless operation and develop the new ones continually being discovered, but don't forget that while the surface may be rich in gold beneath the surface, it is richer still in the soil and plant orchards, orchards, ORCHARDS, vineyards, vineyards, VINEYARDS, until Nevada County becomes in fact what she was destined to be, the Eden of the world.

While I am speaking of fruit raising, permit me to speak also in connection of what seems to me to be one of the great and immediate needs of this county: I refer now to a fruit cannery, or perhaps several such institutions located in the two principal towns of the county. There is already a considerable quantity of fruit annually wasted in this county. After the local market is supplied there remains sufficient fruit to make it profitable to send it East, and it remains to rot under the trees and assist insect pests, such as the cod moth for instance, in propagating their species.

A fruit cannery would, first of all, offer an immediate market for the surplus fruit produced in the county, and it would act as an economic and enormous stimulant to the setting out of fruit orchards. It would be demonstrated that there is a ready market right at home for the fruit, and there will be plenty of men who will be glad to plant orchards and produce it. In considering such a project two things must, of course, be taken into consideration—the cost of the original plant, and the expense of running the institution forward. The first would be very trifling indeed. A rough build-up of the simplest of machinery would do to begin with. Indeed, it would not be advisable to begin on an expensive scale. That would be the best way to insure the failure of the project, by discouraging the farmers and bringing the whole thing into contempt. Begin with a small cannery for the present production of fruit, and increase as the production of fruit increases; and the increase would be almost incredibly

small to the expense of conducting such an establishment, it need not be at all heavy; but on the contrary, it would confer incalculable benefit on the boys of our town, by furnishing them with employment and adequate wages.

The population in Nevada City and Grass Valley is mainly a mining population. Many of the families are large, and the parents greatly need the assistance of their sons and daughters, as they grow older and are unable to attend public schools, to enable them to properly support their families. At present many of these young boys and girls are living in idleness. They cannot work in the mines, and the supply of labor greatly exceeds the demand. So the girls—that is, those of the generation that do not go out to service or succeed in obtaining positions as teachers in our public schools—have nothing to do whatever, and not means of intellectual culture. And the boys, also, too many of them are led into lives that are of little credit to themselves, their parents, and the country. Now, such an establishment as this of which I am

speaking, would give them employment at such wages as would enable them to render themselves useful members of the community, and at the same time give large profits to the institution. In fact, so cheap is both the original plant of such an institution and the labor necessary to carry it on, that it can be made profitable from the very beginning. What say you to a canning establishment as one of the business enterprises of the near future? The farmers can start it themselves. A coöperative institution is a feasible and a practicable thing. Men desirous of establishing themselves in a business that is certain to grow until it becomes one of the most profitable of investments, can do it. Who will take the initial step? And there will be no difficulty in disposing of the product of Nevada County canneries. Our fruits will be in demand from the very first at an advance of from 50 per cent above those of any other section. And speaking of employment for our boys and girls, let but the fruit-growing interests of the county be developed, and the question of employment, and with it the great question of our children's future, is largely solved. Several large fruit growers and a multitude of the smaller orchardists have discharged their Chinamen, and employed the boys and girls of the neighborhoods and neighboring towns to gather their fruits, and the result was that the fruits were gathered better than the Chinamen would have done it. Many a struggling father and mother were materially assisted in caring for and educating their families; and many boys and girls, besides earning handsome sums, learned also a needed and valuable lesson in manly and womanly independence and self-reliance.

These few thoughts, among the many that crowded into my mind, I thought best to present to you to-night. I have said but little of our mines because, first of all, I don't like to talk about anything concerning which I know so little, and secondly because they have attracted little attention from me. They are known throughout Europe and America as among the richest of the world, and yet we have scarcely begun to begin at them. A hundred years from now this mining industry will be but in its pride. Neither have I spoken of the beautiful and wonderful products of industry and skill that are here to be seen in every hand. All these articles demonstrate not only the natural resources of the county, but the fact that in point of wealth, and culture, and skill the citizens of this county do not propose to be a whit behind any other section of our grand country. When I look around this assembly of intelligent men and fair and no less intelligent women together with the products of their hands and minds, I feel how being a citizen of your county. And what you now see is but a present and a faint prophecy, of the grand Nevada County of the future. Let us make a hurried survey of what it will certainly be in the near future, and then close.

The days and years pass by. The generations come and go. But on the mountain tops of the Nevada County of the future. The old snow-capped mountains still lift their mighty heads to the sky. They are the same as those upon which you gazed when in the early fifties you first set foot in this, the El Dorado of your youth, the land of gold. But they alone remain unchanged. From the vantage ground of the twentieth century I look upon these slopes, sides once covered with chaparral, madrone, manzanita, whitebarked scrub oak, and lo, a magical transformation! All over these

stretching away towards the plains, are thousands upon thousands of vineyard and orchard, loaded down with luscious fruits, ripening under the ardent rays of the southern and western sun. The soft breeze wafted toward me is as balmy as the breeze from Ceylon's shores, and bears with it the aroma of every fruity delicacy that nature's hand has ever bestowed upon even the most favored localities to delight the senses. Down in the valleys I see sweet fields arrayed in living green, and a network of silver I see myriads of streams of pure sweet water rushing down from the mountains, and filling the country with fertility, fruitfulness, and beauty. I hear the bleating of flocks, the lowing of herds, and the neighing of proud and blooded steeds. I hear the hum of industry, the rattle of improved machinery, and the shriek of locomotives of the railroads of the future as they rush hither and thither bearing the traffic of our hundred thousand people on a dozen lines of railroad to every part of our land. I hear the thunder of quartz mills of a hundred years from now, and they are not miles apart, but their number is legion. And dotting the hillsides and valleys, in close and neighborly proximity, I see the happy homes of our people. Mingled with the hum of industry I hear sounds of music, and the happy, laughing voices of children. School houses have multiplied, churches point their spires heavenward, and a university seems to lift its stately dome above the encircling hills. I see the smoke of factories and fruit canneries, and wagons laden with precious stores depositing their golden burden at their doors. The future comes and goes, but the earth laughs at their efforts to exhaust the land. I look for the cities of 1890, but they are gone, and instead of the cities of Grass Valley and Nevada, I see one large and beautiful city. For the two towns have reached out their hands to each other, and clasped each other in such close embrace that they have lost their individuality, and are no longer twain, but one. Their long engagement has terminated in a happy union, and they have become one (but, as in all marriages, I cannot say which one). All this I see, and it is coming to pass as that time endures. Then forward, my fellow citizens, and let us endeavor to perform faithfully our part in making this a grand reality.

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS IV.		
Best mattress	Legg & Shaw	Nevada City
Best spring bed	Legg & Shaw	Nevada City
Best exhibit of cabinet work	J. C. McCormack	Nevada City
Best bed-room set	Legg & Shaw	Nevada City
Best exhibit of carpets	Legg & Shaw	Nevada City
Best exhibit of furniture coverings	Legg & Shaw	Nevada City
CLASS V.		
Best sawhorse	S. S. Cox	Nevada City
CLASS VII.		
Best specimen of dentistry work not made in the county	Dr. W. S. Richey	Nevada City

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
Best silk embroidery	Mrs. C. O. Matteson	Nevada City
Best arrasene embroidery	Mrs. M. A. Gartlie	Nevada City
Best outline embroidery	Miss A. Stranahan	Nevada City
Best embroidered piano cover	Mrs. L. O. Palmer	Nevada City
Best embroidered table cover	Miss H. King	Nevada City
Best embroidered table scarf	Mrs. J. M. Hadley	Nevada City
Best embroidered chair seat	Mrs. H. H. Mills	Nevada City
Best embroidered banner	Mrs. M. A. Gartlie	Nevada City
Best embroidered picture	Mrs. C. R. Clark	Nevada City
Best fine lace work	Mrs. M. J. Farrell	Nevada City
Best braid work	Miss F. Muller	Nevada City
Best applique work	Mrs. J. Cairns	Nevada City
Handsome crazy quilt	Mrs. J. Morrison	Nevada City
Handsomest ornamental panels	Miss Lavinia McLean	Nevada City
Handsomest toilet set	Miss Emily Delbridge	Nevada City
Best hammered work	Miss Hattie Fisher	Nevada City
Best luster painting on plush	Mrs. M. A. Gartlie	Nevada City
Best paper mats	Miss A. Stranahan	Nevada City
Handsomest fire screen	Mrs. J. Cairns	Nevada City
Handsomest pillow shams	Mrs. H. Douglas	Nevada City
Handsomest crochet skirt	Mrs. James Daniels	Nevada City
Handsomest sofa cushion	Miss A. Stranahan	Nevada City
Handsomest lambrequins	Mrs. M. A. Gartlie	Nevada City
Handsomest handkerchief box	Miss Allie Nilon	Nevada City
Handsomest tidy	Miss Emily Rolfe	Nevada City
Handsomest lamp mat	Mrs. C. Loughridge	Nevada City
Handsomest pincushion	Mrs. J. M. Hadley	Nevada City
Best display of darned net work	Mrs. L. J. Ford	Nevada City
Best display of bead work	Miss A. Stranahan	Nevada City
Best display of hair work	Mrs. M. A. Gartlie	Nevada City
Best display of ladies' underwear	Mrs. N. Weber	Nevada City
Best ottoman cover	Miss Minnie Brand	Nevada City
Best child's afghan	Mrs. J. Cairns	Nevada City
Best hearth rug	Miss A. Stranahan	Nevada City
Best crochet shawl	Mrs. W. S. Stoddard	Grass Valley
Best bedspread	Mrs. Louisa King	Nevada City
Best knit bedspread	Mrs. R. D. Plummer	Nevada City
Best patchwork quilt	Mrs. M. A. Gartlie	Nevada City
Best knit undervest	Mrs. J. J. Dorsey	Grass Valley
Best knit silk stockings	Mrs. T. S. Ford	Nevada City
Best knit cotton stockings	Mrs. H. Stockham	Nevada City
Best knit woolen stockings	Mrs. H. Stockham	Nevada City
Best lady's home-made dress	Mrs. O. L. Twitchell	Grass Valley
Best Mexican work	Mrs. T. S. Ford	Nevada City
Largest meritorious display of fancy work by one lady	Miss A. Stranahan	Nevada City
Second largest	Mrs. M. A. Gartlie	Nevada City

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
quilt, not made in the dis-	Mrs. Alice Dunster	Nevada City	Diploma.
mat made of rags	Miss A. Stranahan	Nevada City	\$1 50
CLASS II.			
dress, for miss under four-	Miss Alice Caldwell	Nevada City	\$3 00
years of age	Miss Ethel Mulloy	Nevada City	\$2 00
SPECIAL MENTION.			
	Mrs. R. D. Houston	Nevada City	Diploma.
	Mrs. L. C. Bowman	Nevada City	Diploma.
	Mrs. S. J. Murchie	Nevada City	Diploma.
	Mrs. C. R. Clark	Nevada City	Diploma.
	Miss Addie Stenger	Nevada City	Diploma.
	Mrs. J. A. Rapp	Nevada City	Diploma.
	Mrs. Louisa King	Nevada City	Diploma.
	Mrs. A. M. Rapp	Nevada City	Diploma.
	Mrs. C. Loughridge	Nevada City	Diploma.
	Mrs. L. O. Palmer	Nevada City	Diploma.
	Mrs. McCauley	Nevada City	Diploma.
	Mrs. L. C. Bowman	Nevada City	Diploma.
CLASS III.			
cash silk quilt	Miss Lulu Marsh	Nevada City	\$2 00
work	Miss Effie Robbins	Nevada City	\$1 00
work tidy	Miss Nellie Palmer	Nevada City	\$1 00

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
half bushel rye	F. E. Morrill	Penn Valley	\$2 50
half bushel corn	F. E. Morrill	Penn Valley	\$2 50
CLASS II.			
of broom corn	J. R. Balch	R'h and Ready	\$1 50
corn on stalk	John Montgomery	Penn Valley	\$2 50
corn on stalk	F. E. Morrill	Penn Valley	\$1 50
corn on stalk	Mark Thornton	Grass Valley	\$2 00
of potatoes	J. F. Kidder	Grass Valley	\$1 50
of potatoes	Mark Thornton	Grass Valley	\$2 50
of onions	J. F. Kidder	Grass Valley	\$2 00
of onions	Mark Thornton	Grass Valley	\$2 50
of tomatoes	F. E. Morrill	Penn Valley	\$1 00
of tomatoes	J. F. Kidder	Grass Valley	\$2 00
of cabbage	Mark Thornton	Grass Valley	\$1 00
of cabbage	D. B. Getchell	Nevada City	\$2 00
of watermelons	J. F. Kidder	Grass Valley	\$1 00
of watermelons	Mark Thornton	Grass Valley	\$2 00
of muskmelons	Henry Hansen	Grass Valley	\$1 00
of muskmelons	J. F. Kidder	Grass Valley	\$1 00
of table carrots	F. E. Morrill	Penn Valley	\$0 50
of table carrots	J. G. Worthington	Nevada City	\$1 00
of parsnips	Mark Thornton	Grass Valley	\$0 50
of parsnips	Mark Thornton	Grass Valley	\$1 00
of cucumbers	J. F. Kidder	Grass Valley	\$0 50
of cucumbers	Chas. McKelvey	Ormonde	\$1 00
of stock beets	Henry Hansen	Grass Valley	\$0 50
of stock beets	Mark Thornton	Grass Valley	\$2 00
of table beets	F. E. Morrill	Penn Valley	\$1 00
of table beets	J. G. Worthington	Nevada City	\$2 00
of dried beans	Mark Thornton	Grass Valley	\$1 00
of dried beans	S. N. Stranahan	Nevada City	\$1 00

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best display and greatest variety of vegetables.....	Mark Thornton	Grass Valley
Second best.....	J. F. Kidder	Grass Valley
Best peck of potatoes.....	Mark Thornton	Grass Valley
CLASS III.		
Handsomest bouquet of cut flowers.....	Miss J. Hathaway	Nevada City
Second handsomest.....	Mrs. G. A. Gray	Nevada City
Handsomest display of cut flowers.....	Mrs. L. O. Palmer	Nevada City
Best collection of flowering plants in bloom.....	Mrs. Jas. Munro	Nevada City
Second best.....	Mrs. L. O. Palmer	Nevada City
Third best.....	Mrs. J. Jack	Nevada City
Best collection of hanging baskets.....	Mrs. L. O. Palmer	Nevada City
Best display of ferns.....	Mrs. J. M. Hadley	Nevada City
Best display of autumn leaves.....	Mrs. J. M. Hadley	Nevada City
Best display of ornamental grasses.....	Mrs. J. M. Buffington	Nevada City
Best display of cultured grasses.....	J. M. Hales	Grass Valley
Second best.....	J. R. Balch	R'h and Ready
Best display of hops.....	S. N. Stranahan	Nevada City
Best display of grain in sheaf.....	J. M. Hales	Grass Valley
Second best.....	Geo. C. Gaylord	Nevada City
CLASS IV.		
Best ten pounds butter in rolls.....	Mrs. S. N. Stranahan	Nevada City
Second best.....	Mrs. Jackson Miller	Penn Valley
CLASS V.		
Best two loaves bread forty-eight hours old.....	Mrs. John Caldwell	Nevada City
Second best.....	Mrs. S. N. Stranahan	Nevada City
Best biscuits.....	Mrs. S. N. Stranahan	Nevada City
Best brown bread.....	Mrs. S. N. Stranahan	Nevada City
Best two loaves wheat bread.....	Mrs. S. N. Stranahan	Nevada City
Best salt-rising bread.....	Mrs. John Caldwell	Nevada City
Best one dozen doughnuts.....	Mrs. S. N. Stranahan	Nevada City
Best exhibit and greatest variety of bread.....	Mrs. S. N. Stranahan	Nevada City
SPECIAL MENTION.		
Pumpkins.....	E. Galli	Grass Valley
Squash.....	Dan Marsh	Nevada City
Hubbard squash.....	J. F. Kidder	Grass Valley
Green peppers.....	J. F. Kidder	Grass Valley
Egg plant.....	J. F. Kidder	Grass Valley
Celery.....	J. F. Kidder	Grass Valley
Ochre.....	J. F. Kidder	Grass Valley
Kohl-rabi.....	Henry Hansen	Grass Valley
Cauliflower.....	Dan Marsh	Nevada City
Sunflower.....	Dan Marsh	Nevada City
Turnips.....	Mark Thornton	Grass Valley
Beans.....	Mark Thornton	Grass Valley
Egyptian corn on stalk.....	Geo. C. Gaylord	Nevada City
Popcorn on stalk.....	E. Muller	Nevada City
Popcorn on ear.....	D. B. Getchell	Nevada City
Garlic.....	Mark Thornton	Grass Valley

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Display of apples.....	S. Allison	Nevada City	\$10 00
.....	J. R. Balch	R'h and Ready	\$5 00
.....	E. D. Bridges	Nevada City	\$2 50
Display of pears.....	W. B. Stewart	Nevada City	\$10 00
.....	S. Allison	Nevada City	\$5 00
.....	Henry Hansen	Grass Valley	\$2 50
Display of peaches.....	J. R. Balch	R'h and Ready	\$10 00
.....	S. Allison	Nevada City	\$5 00
.....	John Montgomery	Penn Valley	\$2 50
Display of plums.....	J. M. Hales	Grass Valley	\$10 00
.....	J. R. Balch	R'h and Ready	\$5 00
.....	Geo. A. Gray	Nevada City	\$2 50
Display of nectarines.....	Dan Marsh	Nevada City	\$5 00
Display of prunes.....	S. Allison	Nevada City	\$10 00
.....	J. M. Hales	Grass Valley	\$5 00
Display of figs.....	N. S. Sigerstrand	Pet Hill	\$5 00
.....	J. R. Balch	R'h and Ready	\$3 00
.....	S. Allison	Nevada City	\$2 00
Display of oranges.....	J. H. Niles	Penn Valley	\$5 00
Display of table grapes.....	Paine & Twitchell	Grass Valley	\$15 00
.....	J. H. Niles	Penn Valley	\$10 00
.....	S. Allison	Nevada City	\$5 00
Display of wine grapes.....	J. H. Niles	Penn Valley	\$15 00
Display of blackberries.....	J. A. Heyer	Nevada City	\$3 00
Display of strawberries.....	J. A. Heyer	Nevada City	\$3 00
Display of raspberries.....	J. A. Heyer	Nevada City	Diploma.
CLASS II.			
Display of dried apples.....	S. N. Stranahan	Nevada City	Dip. & \$3
.....	Mrs. E. D. Bridges	Nevada City	\$2 00
Display of dried pears.....	S. N. Stranahan	Nevada City	Dip. & \$3
.....	Mrs. E. D. Bridges	Nevada City	\$2 00
Display of dried peaches.....	S. N. Stranahan	Nevada City	Dip. & \$3
.....	Mrs. E. D. Bridges	Nevada City	\$2 00
Display of dried plums.....	S. N. Stranahan	Nevada City	Dip. & \$3
.....	Mrs. E. D. Bridges	Nevada City	\$2 00
Display of dried nectarines.....	Mrs. E. D. Bridges	Nevada City	Dip. & \$3
.....	S. N. Stranahan	Nevada City	\$2 00
Display of dried figs.....	Mrs. E. D. Bridges	Nevada City	Dip. & \$3
.....	S. N. Stranahan	Nevada City	\$2 00
Display of dried raisins.....	Mrs. E. D. Bridges	Nevada City	Dip. & \$10
.....	S. N. Stranahan	Nevada City	\$5 00
Display of dried blackberries.....	Mrs. E. D. Bridges	Nevada City	Dip. & \$3
.....	S. N. Stranahan	Nevada City	\$2 00
Display of dried cherries.....	Mrs. E. D. Bridges	Nevada City	Dip. & \$3
.....	S. N. Stranahan	Nevada City	\$2 00
Display of dried prunes.....	S. N. Stranahan	Nevada City	Dip. & \$3
.....	Mrs. E. D. Bridges	Nevada City	\$2 00
Display of dried fruits.....	S. N. Stranahan	Nevada City	Dip. & \$10
CLASS III.			
Walnuts.....	E. Muller	Nevada City	\$7 50
.....	S. Allison	Nevada City	\$2 50
Almonds.....	Mrs. Jackson Miller	Penn Valley	\$2 50
.....	Mrs. E. D. Bridges	Nevada City	\$2 50
Walnuts.....	C. B. Locklin	Nevada City	\$2 00
CLASS IV.			
Display of preserves in glass.....	Mrs. S. N. Stranahan	Nevada City	Dip. & \$3
.....	Mrs. George Jacobs	Nevada City	Dip. & \$5
.....	Mrs. B. S. Rector	Nevada City	\$3 00
.....	Mrs. George Nihell	Nevada City	Diploma.
Display of pickles.....	Mrs. George Jacobs	Nevada City	\$3 00
.....	Mrs. George Nihell	Nevada City	\$3 00
.....	Mrs. A. Hartung	Nevada City	Dip. & \$5
.....	N. S. Sigerstrand	Nevada City	Diploma.

SIXTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS V.		
Best one half dozen bottles brandy	A. Isoard	Nevada City
Best two dozen bottles claret	Nevada Winery Co.	Nevada City
Best dozen bottles port wine	A. Isoard	Nevada City
Best dozen bottles malaga wine	A. Isoard	Nevada City
Best two dozen bottles sherry wine	I. J. Rolfe	Nevada City
SPECIAL MENTION.		
Japanese persimmons	Henry Hansen	Grass Valley
Orange quinces	N. G. Sigerstrand	Pet Hill
Pomegranates	N. G. Sigerstrand	Pet Hill
Hickory nuts	S. Allison	Nevada City
Butter nuts	S. Allison	Nevada City
Filberts	S. Allison	Nevada City

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Best oil painting	Mrs. W. D. Vinton	Nevada City
Second best	Mrs. M. Wilson	Grass Valley
Best collection of paintings	Mrs. M. J. Farrell	Grass Valley
CLASS II.		
Best pastel	Miss M. E. Collins	Nevada City
Best crayon drawing	W. J. Straight	Grass Valley
Best pencil drawing	Miss Cora Sutton	Nevada City
Best monochromatic drawing	Miss Cora Sutton	Nevada City
CLASS III.		
Best original oil painting	Miss L. McLean	Grass Valley
Best copy oil painting	Miss Nellie Hanley	Nevada City
Best exhibit of penmanship	Miss Alice Caldwell	Nevada City
CLASS IV.		
Best display of photographic views	Emile Abadie	Grass Valley
CLASS VI.		
Best display of gold-bearing ores from one mine in county	North Star Mine	Grass Valley
Second best	Washington Mine	Ormonde
SPECIAL MENTION.		
Engraving on copper plate	Carl Brand	Nevada City
Collection of oil paintings	J. G. Bryant	Nevada City
Oil painting on porcelain and glass tile	Mrs. George Shaw	Nevada City
Oil painting	Mrs. J. J. Jackson	Nevada City
Oil painting in two colors	Mrs. J. D. Fleming	Nevada City

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 23, 1890.

RACE NO. 1—TROTTING.

For trotters. Free purse of two hundred and fifty dollars. Mile heats, best three

Name and Pedigree of Horse.	By Whom Entered.	Address.
J. h. g., by Revolution	C. F. Taylor	Nevada City.
J. ch. m., by Carr's Mambrino	J. Cochran	Salinas City.
J. all. b. m., by Brigadier	W. F. Smith	Sacramento.

SUMMARY.

Winny J	1	1	2	1
And H	2	2	1	2
Chance All	3	3	3	3

Time—2:37½; 2:31; 2:33½; 2:33.

RACE NO. 2—RUNNING.

For running horses. Free purse of one hundred and fifty dollars. Three quarters of a mile repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
J. h. m., by Wildidle; dam, Sallie Hart	Jas. H. Muse	Sacramento.
J. h. g., by Wildidle; dam, Mary Giv	Jos. Courtney	Sacramento.
J. h. a. c., by Nick of the Woods	T. Bally	Grass Valley.

SUMMARY.

Emile F	1	1
Old Oaks	2	2
Brook	3	3

Time—1:21; 1:19½.

WEDNESDAY, SEPTEMBER 24, 1890.

RACE NO. 3—TROTTING AND PACING.

For trotters and pacers. Free purse of three hundred and twenty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
J. h. s., by Brigadier	Chas. Sherman	Chico.
J. h. m., by Brown Jug; dam, by Gen.	S. K. Trefry	Sacramento.
J. h. a., by Echo; dam, Correct	G. T. Johnson	San José.
	C. F. Taylor	Nevada City.

SUMMARY.

Pasha	2	3	2	1	1	1
Sargent	1	2	1	2	4	3
Geo. Wapple	4	1	4	4	2	2
Dinah	3	4	3	3	3	2

Time—2:32; 2:28½; 2:30½; 2:30½; 2:30; 2:32.

RACE No. 4—TROTTING.

For county two-year olds. Free purse of one hundred dollars. Mile heats, best three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Kate Hamilton, b. f., by Gen. Hamilton; dam, Flora B	B. A. Penhall	Grass Valley
Adler Boy, ch. s., by Geo. Wapple; dam, by Consent	Chas. Sherman	Glenbrook
Milton S, s. c., by Elmo; dam, by Belmont	C. F. Taylor	Nevada City

SUMMARY.

Milton S	1	1
Adler Boy	2	1
Kate Hamilton	dis.	

Time—3:03; 3:10½.

THURSDAY, SEPTEMBER 25, 1890.

RACE No. 5—TROTTING.

For named horses. Free purse, one hundred and sixty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lady Turner, blk. m., by Singleton; dam, by Black Hawk	C. H. Wheeler	Nevada City
Ida D, ch. m., by Doncaster; dam, Nellie, by McClellan	C. F. Taylor	Nevada City
Balance-All, b. m., by Brigadier; dam, by Billy McCracken	W. F. Smith	Nevada City
Duke Cameo, blk. s., by Jim Mulvanna; dam, Nellie, by George M. Patchen	Adam Herold	Nevada City

SUMMARY.

Lady Turner	3	1	1	3	3
Balance-All	1	2	3	1	2
Duke Cameo	2	3	2	2	1
Ida D	4	dis.			

Time—2:37½; 2:40; 2:39½; 2:41½; 2:37; 2:38.

RACE No. 6—SADDLE HORSE RACE.

District horses. Purse, fifty dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
ch. g., by Plumas	Charles Sherman	Glenbrook.
ch. g., by Nick of the Woods	Pete Smith	Grass Valley.
A. m., by Nick of the Woods	S. Benoit	Grass Valley.

SUMMARY.

ch. g.	1
Valentine	2
No name	3

Time—2:16.

RACE No. 7—RUNNING.

Purse, one hundred and fifty dollars. One and one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
ch. b. g., by Wildidle; dam, Mary Givens	Joseph Courtney	Sacramento.
ch. f. b. m., by Wildidle; dam, Sallie Hart	James H. Muse	Sacramento.

SUMMARY.

Fannie F.	1
Wild Oats	2

Time—2:02½.

FRIDAY, SEPTEMBER 26, 1890.

RACE No. 8—TROTTING.

Named horses. Purse, two hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
ch. m., by Carr's Mambrino	J. Cochran	Salinas City.
ch. g., by Revolution; dam, Nellie J	C. F. Taylor	Nevada City.
Velox, b. g., pedigree unknown	Geo. Prouse	Sacramento.

SUMMARY.

ch. m.	2	1	1	1
ch. g.	1	2	2	2
Velox	dis.			

Time—2:51; 2:31; 2:32; 2:30.

RACE No. 9—TROTTING.

For district yearlings. Purse, fifty dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
M'liss, b. f., by Pasha; dam, unknown	O. Sirard	Grass Valley
General, s. s., by General Hamilton; dam, unknown	J. R. Nickerson	Grass Valley

SUMMARY.

General	1
M'liss	2

Time—4:00.

RACE No. 10—RUNNING.

Purse, one hundred dollars. Five eighths of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Glenbrook, s. c., by Nick of the Woods; dam, Nellie, by Ballot Box	T. Bally	Grass Valley
Flora, b. m., by Nick of the Woods; dam, unknown	J. Benoit	Grass Valley
Valentine, b. g., by Nick of the Woods; dam, unknown	Pete Smith	Grass Valley

SUMMARY.

Glenbrook	1 1
Flora	2 2
Valentine	3 3

Time—1:16; 1:14.

SATURDAY, SEPTEMBER 27, 1890.

RACE No. 11—TROTTING.

For named horses. Free purse of three hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sargent, g. g., by Brown Jug; dam, by Gen. Taylor	G. T. Johnson	Grass Valley
Maud H, ch. m., by Carr's Mambrino	J. Cochran	Grass Valley
Dinah, b. m.	S. K. Trefry	Grass Valley
Geo. Wapple, ch. s., by Brigadier	C. Sherman	Grass Valley

SUMMARY.

Sargent	1 1
Maud H	2 2
Dinah	3 3
Geo. Wapple	4 4

Time—2:30½; 2:28; 2:31.

RACE No. 12—TROTTING.

For named horses. Free purse, one hundred and twenty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Turner, blk. m., by Singleton; dam, by Hawk	C. H. Wheeler	Chico.
Cameo, blk. s., by Jim Mulvenna; dam, by Geo. M. Patchen	Adam Herold	Sacramento.
All, b. m., by Brigadier; dam, by Billy Jackson	W. F. Smith	Sacramento.

SUMMARY.

Cameo	3 1 1 1
Lady Turner	1 2 2 3
Balance-All	2 3 3 2

Time—2:37½; 2:39½; 2:39; 2:40.

TRANSACTIONS

OF THE

EIGHTEENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Alpine, Mono, and Inyo.

REPORT.

OCTOBER 10, 1890.

to the honorable the State Board of Agriculture:

THE MEMBERS: The Directors of the Eighteenth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

C. MULHOLLAND,
Secretary.

OFFICERS OF THE ASSOCIATION.

ALVA R. CONKLIN.....

C. MULHOLLAND.....

OMIE I. MAIRS.....

DIRECTORS.

ALVA R. CONKLIN.....

JOHN S. GORMAN.....

C. A. WALTER.....

A. W. EIBESHUTZ.....

W. S. ENOS.....

E. ROBINSON.....

NATHAN RHINE.....

FINLEY McIVER.....

RECEIPTS AND EXPENDITURES.

Receipts.

Subscriptions.....	\$190 00
Admission.....	107 50
Member and season tickets.....	123 00
Entries.....	267 50
Contribution.....	10 00
Receipts.....	113 25
.....	88 00
.....	30 00
.....	3,000 00
.....	66 77
.....	<u>\$4,004 02</u>

Expenditures.

.....	\$1,184 00
.....	25 00
.....	6 20
.....	162 50
.....	5 00
.....	27 25
.....	900 00
.....	72 00
.....	5 00
.....	70 00
.....	40 00
.....	25 00
.....	150 00
.....	5 90
.....	29 00
.....	270 00
.....	10 00
.....	145 75
.....	12 00
.....	900 00
.....	2 00
.....	1 00
.....	<u>\$4,047 60</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS II—STANDARD-BRED.		
Stallion, any age	N. E. Conklin	Independence
CLASS III—ROADSTERS.		
Stallion, aged	R. C. Spear	Lone Pine
Stallion, two years old	Mrs. Mollie Conklin	Independence
CLASS IV—HORSES OF ALL WORK.		
Stallion, aged	Jacob Vogt	Independence
Stallion, two years old	Jacob Vogt	Independence
Colt	Jacob Vogt	Independence
Stallion, one year old	Jacob Phol	Citrus
Mare, one year old	C. A. Walter	Independence
Mare and family	John Lucas	Lone Pine
CLASS V—DRAFT HORSES.		
Mare, aged	F. Schabbell	Independence
Mare and colt	F. Schabbell	Independence
CLASS VI—MATCHED TEAMS.		
Carriage team	E. Robinson	Independence
Buggy team	John Lucas	Lone Pine
CLASS VII—SWEEPSTAKES.		
Stallion, any breed or age	A. H. Allen	Bridgeport
Mare, any breed or age	P. La Barge	Lone Pine
CLASS IX—MULES.		
Span of mules, aged	O. I. Mairs	Independence
CLASS X—BULLS.		
Bull, three years old and over	E. Robinson	Independence
Bull, one year old	E. Robinson	Independence
Bull, two years old	O. I. Mairs	Independence
CLASS XI—COWS.		
Cow, three years old and over	O. I. Mairs	Independence
Cow, two years old	E. Robinson	Independence
Cow and calf	Jacob Vogt	Independence
Cow and two calves	F. Schabbell	Independence
CLASS XII—GOATS.		
Angora goats	A. Rossi	Big Pine
CLASS XIII—SWINE.		
Hogs	H. Levy	Independence
Sow and pigs	John Baxter	Independence
CLASS IV—POULTRY.		
Best display, any breed	C. A. Walter	Independence
Second best	Mrs. John Baxter	Independence
Best turkeys	F. Schabbell	Independence

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
AGRICULTURAL PRODUCTS.			
One hundred pounds flour	Miss Ray Bell	Independence	\$3 00
Best flour	Jacob Vogt	Independence	\$2 00
One hundred pounds wheat	Jacob Vogt	Independence	\$3 00
One hundred pounds shelled corn	Jacob Vogt	Independence	\$3 00
One hundred pounds barley	H. Glader	Independence	\$3 00
One hundred pounds corn in ear	H. Glader	Independence	\$2 00
Best one hundred pounds barley	C. A. Walter	Independence	\$2 00
Best one hundred pounds wheat	C. A. Walter	Independence	\$2 00
One hundred pounds rye	C. A. Walter	Independence	\$3 00
Best one hundred pounds	C. A. Walter	Independence	\$2 00
One hundred pounds alfalfa seed	C. A. Walter	Independence	\$3 00
Best display of agricultural products	C. A. Walter	Independence	\$20 00
Best display of grasses	C. A. Walter	Independence	\$8 00
One hundred pounds oats	O. I. Mairs	Independence	\$3 00
Best one hundred pounds rye	John Baxter	Independence	\$2 00
Best corn	John Baxter	Independence	\$2 00
Best alfalfa seed	J. S. Gorman	Independence	\$2 00
Best hay	John Shepherd	Independence	\$8 00
Best display of agricultural products	E. Robinson	Independence	\$15 00
CLASS II—VEGETABLES.			
One hundred pounds Early Rose potatoes	E. Robinson	Independence	\$2 50
One hundred pounds potatoes of any	E. Robinson	Independence	\$2 50
One hundred pounds sweet potatoes	E. Robinson	Independence	\$2 50
One hundred pounds parsnips	E. Robinson	Independence	\$2 00
One hundred pounds carrots	E. Robinson	Independence	\$2 00
One hundred pounds onions	E. Robinson	Independence	\$2 00
One dozen squash	E. Robinson	Independence	\$2 00
One dozen watermelons	E. Robinson	Independence	\$2 00
Best Early Rose potatoes	W. L. Hunter	Independence	\$2 00
Best any variety potatoes	John Kispert	Independence	\$2 00
Best parsnips	John Kispert	Independence	\$1 00
Best carrots	John Kispert	Independence	\$1 00
Best turnips	John Kispert	Independence	\$2 00
One hundred pounds turnips	H. Glader	Independence	\$2 00
Half dozen cabbages	H. Glader	Independence	\$2 00
One dozen cucumbers	H. Glader	Independence	\$2 00
Best turnips	C. A. Walter	Independence	\$1 00
Best tomatoes	C. A. Walter	Independence	\$2 00
One hundred pounds peas	C. A. Walter	Independence	\$2 00
One hundred pounds beans (white)	C. A. Walter	Independence	\$2 00
One hundred pounds beans (bayou)	C. A. Walter	Independence	\$2 00
One hundred pounds beans (lima)	C. A. Walter	Independence	\$2 00
Half dozen pumpkins	C. A. Walter	Independence	\$2 00
One hundred pounds tomatoes	John Baxter	Independence	\$2 00
One hundred pounds onions	John Baxter	Independence	\$1 00
Best one half dozen pumpkins	John Baxter	Independence	\$1 00
Best one half dozen squash	Miss Ray Bell	Independence	\$1 00
Best cabbage	Jacob Vogt	Independence	\$1 00
Best cucumbers	Jacob Vogt	Independence	\$1 00
Best watermelons	J. V. Skinner	Independence	\$1 00
Best melons	J. V. Skinner	Independence	\$2 00
PRESERVES, JELLIES, BUTTER, ETC.			
One hundred pounds butter, in rolls	O. I. Mairs	Independence	\$3 00
One hundred pounds butter, in jars	O. I. Mairs	Independence	\$4 00
Best butter, in jars	O. I. Mairs	Independence	\$10 00
One hundred pounds lard	C. A. Walter	Independence	\$2 00
Best fruit butter, in jars	C. A. Walter	Independence	\$5 00
Best fruit butter, in jars	C. A. Walter	Independence	\$5 00
One hundred pounds ham	C. A. Walter	Independence	\$5 00
One hundred pounds bacon	C. A. Walter	Independence	\$10 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Best honey	Wm. M. Rasmussen.	Independence.	
Best apiary display	Wm. M. Rasmussen.	Independence.	
Second best honey	John Baxter.	Independence.	
Best preserves	Mrs. John Baxter.	Independence.	
Second best pickles	Mrs. John Baxter.	Independence.	
Second best jelly	Julius Roeper.	Independence.	
Second best preserves	Miss Ray Bell.	Independence.	

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—HORTICULTURAL PRODUCTS.			
Best display of apples	John Baxter.	Independence.	
Second best display of pears	John Baxter.	Independence.	
Best display of plums	John Baxter.	Independence.	
Second best display of prunes	John Baxter.	Independence.	
Best display of fruits of all kinds	John Baxter.	Independence.	
Second best display of apples	John Kispert.	Independence.	
Best display of grapes	John Kispert.	Independence.	
Best display of table grapes	John Kispert.	Independence.	
Best display of table peaches	E. Robinson.	Independence.	
Second best display of plums	E. Robinson.	Independence.	
Best display of prunes	E. Robinson.	Independence.	
Second best display of grapes	E. Robinson.	Independence.	
Best display of raisin grapes	E. Robinson.	Independence.	
Second best display of peaches	C. W. Craig.	Independence.	
Best display of pears	C. A. Walter.	Independence.	
Best display of wine grapes	C. A. Walter.	Independence.	
Best display of raisins	C. A. Walter.	Independence.	
Best display of dried fruit	C. A. Walter.	Independence.	
Second best display of fruit, all kinds	C. A. Walter.	Independence.	
Best display of almonds	C. A. Walter.	Independence.	
Best one half dozen bottles wine	C. A. Walter.	Independence.	
Best display of quinces	H. Glader.	Independence.	
Best display of walnuts	Miss Ray Bell.	Independence.	
Best display of peanuts	Miss Ray Bell.	Independence.	

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—FINE ARTS.			
Best oil painting on canvas	Miss Jessie Parsons.	Round Valley.	
Second best	Miss Jessie Parsons.	Round Valley.	
Best crayon	Miss Jessie Parsons.	Round Valley.	
Best satin and Japanese panel	Miss Jessie Parsons.	Round Valley.	
Best collection on canvas	Miss Jessie Parsons.	Round Valley.	
Best pastel drawing	Miss June Skinner.	Round Valley.	
Best photograph of scene in district	Miss M. Mulholland.	Round Valley.	
Best collection of photographs of scenery in district	Miss M. Mulholland.	Round Valley.	

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—MINERALS.			
Best set of minerals, in district	W. L. Hunter.	Independence.	\$25 00
Best collection of curios	W. L. Hunter.	Independence.	\$15 00
Best collection of silver ores	W. L. Hunter.	Independence.	\$10 00
Best display of marble	C. Mulholland.	Independence.	\$20 00
Best display of borax	J. R. Eldred.	Independence.	\$10 00
Best lead ore	J. S. Gorman.	Independence.	\$10 00

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—NEEDLE WORK, ETC.			
Best display and crochet work	Mrs. A. W. Eibeshutz.	Independence.	\$25 00
Best display of crochet, and needle work	Miss Jessie Parsons.	Round Valley.	\$20 00
Best display of work, wool and fancy articles	Mrs. H. E. Wright.	Bishop.	\$35 00
Best display of work and knitting	Miss Addie Lewis.	Independence.	\$15 00
Best display of work	Miss A. Thomson.	Independence.	\$25 00
Best display of needle, and hair work	Miss Lena Thomson.	Independence.	\$20 00
Best display of hat and scarf	Mrs. A. R. Conklin.	Independence.	\$10 00
Best display of hand and Spanish needle work	Mrs. J. R. Moffett.	Independence.	\$10 00
Best display of dresses	Mrs. J. Baxter.	Independence.	\$5 00
Best display of hand calico dress, by girl four years old	Miss M. Gorman.	Independence.	\$10 00
Best display of made skirt	Miss Jennie Baxter.	Independence.	\$5 00
Best display of dress, special	Miss Ray Bell.	Independence.	\$2 50
Best display of work and needle work, special	Miss Jessie Parsons.	Round Valley.	\$12 00
Best display of work and needle work, special	Thomas Kehoe.	Independence.	\$2 00
Best display of work and eggplant, special	C. A. Walter.	Independence.	\$4 00
Best display of work	H. Levy.	Independence.	\$2 00
Best display of work	J. V. Skinner.	Independence.	\$2 00
Best display of work	Mrs. H. E. Wright.	Bishop.	\$16 00
Best display of work	Miss A. Thomson.	Independence.	\$2 00
Best display of work	Mrs. S. A. Densmore.	Independence.	\$2 00
Best display of work	Mrs. J. W. P. Laird.	Independence.	\$2 00
Best display of work	Miss Jennie Baxter.	Independence.	\$5 00

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 23, 1890.

RACE No. 1—RUNNING.

For untried horses. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Dream, by Alex Butler; dam, Queen Vic.....	I. H. Mulholland.....	Independence.
Pete, pedigree unknown.....	P. La Barge.....	Lone Pine.
Cupid, pedigree unknown.....	R. Carrapeo.....	Lone Pine.

SUMMARY.

Dream.....	1
Cupid.....	1

Time—1:00.

RACE No. 2—TROTTING.

For two-year olds. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Keepsake, by Garnet; dam, Maggie Wiggins.....	E. H. Sterling.....	Independence.
Patsy Albenton, by Albenton (4025); dam, Abbie.....	I. H. Mulholland.....	Independence.
Bismarck, Jr., by Muldoon; dam, Baby.....	Jacob Vogt.....	Independence.

SUMMARY.

Patsy Albenton.....	1
Bismarck, Jr.....	1
Keepsake.....	1

Time—1:51.

WEDNESDAY, SEPTEMBER 24, 1890.

RACE No. 3—TROTTING.

Free for all stallions. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Antare, by Anteros; dam, by Iowa Chief.....	S. P. Smith.....	Independence.
Kingsley, pedigree unknown.....	J. M. Horton.....	Independence.
Andy, by Mac; dam, Belle.....	A. H. Allen.....	Independence.

SUMMARY.

Lady.....	1
Antare.....	dis.
Kingsley.....	dis.

Time—3:10.

RACE No. 4—RUNNING.

For middle horses. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Little Jack; dam, unknown.....	Ed. Rose.....	Independence.
by Little Jack; dam, unknown.....	Walter James.....	Independence.
by Little Jack; dam, unknown.....	Marshal Naylor.....	Big Pine.
by Little Jack; dam, unknown.....	J. M. Horton.....	Bishop.

SUMMARY.

Frank.....	1
Butcher Boy.....	2
Pindango.....	3
Jackskin.....	0

Time—0:55.

THURSDAY, SEPTEMBER 25, 1890.

RACE No. 5—RUNNING.

For all. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Joe Daniels; dam, Mattie C.....	S. P. Smith.....	Bishop.
by Thad Stevens; dam, unknown.....	Marshal Naylor.....	Big Pine.
by Little Jack; dam, unknown.....	J. M. Horton.....	Bishop.

SUMMARY.

Hayseed.....	1
Pinkpocket.....	2
Frank.....	3

Time—1:52½.

RACE No. 6—TROTTING.

For all double teams. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
and Queen, pedigrees unknown.....	R. W. Scott.....	Bishop.
and Lacy, pedigrees unknown.....	I. H. Mulholland.....	Independence.
and Nellie, pedigrees unknown.....	J. D. Mairs.....	Independence.

SUMMARY.

Fanny and Queen 1
 Pete and Lucy 2
 George and Nellie 3

Time—4:11.

FRIDAY, SEPTEMBER 26, 1890.

RACE No. 7—RUNNING.

Free for all. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Brown Frank, by Little Jack; dam, unknown.	J. M. Horton	Big P.
Pickpocket, by Joe Daniels; dam, Mattie C.	S. P. Smith	Big P.
Hayseed, by Thad Stevens; dam, unknown.	Ad. Smith	Big P.

SUMMARY.

Hayseed 1
 Pickpocket 2
 Brown Frank 3

Time—0:53½.

RACE No. 8—TROTTING.

Free for all. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Andy, by Mac; dam, Belle	A. H. Allen	Bridge
Pete, pedigree unknown	P. La Barge	Independence
Fred B, by Mango; dam, McLellan mare.	I. H. Mulholland	Independence

SUMMARY.

Fred B 1
 Andy 2

Time—2:44.

TRANSACTIONS

OF THE

EIGHTEENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of Santa Barbara.

REPORT.

SANTA BARBARA, December 15, 1890.

Honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Nineteenth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

HENRY B. BRASTOW,
Secretary.

OFFICERS OF THE ASSOCIATION.

CHARLES P. LOW President
HENRY B. BRASTOW Secretary
A. L. LINCOLN Treasurer

DIRECTORS.

CHARLES P. LOW Santa Barbara
E. C. ROEDER Santa Barbara
A. HAYMAN Santa Barbara
G. C. PACKARD Santa Barbara
R. MACHIN Santa Barbara
T. C. NANCE Santa Barbara
J. C. HAMER Santa Barbara
W. B. JAMES Santa Barbara

RECEIPTS AND EXPENDITURES.

Receipts.

from 1889	\$421 07
dues	155 00
of tickets	2,498 05
of privileges	216 50
dues	1,155 00
contribution to colt stake	150 00
dues	2,500 00
	<u>\$7,090 62</u>

Expenditures.

premiums	\$1,169 60
dues	2,170 00
essor Baldwin, balloon ascension	450 00
Malone, starter	100 00
A. Williams, rent of stalls, cartage, etc.	133 00
Storke, straw	40 00
Publishing House, posters, etc.	33 10
Whitridge Lithographing Company, posters, etc.	40 86
A. Judge, stationery	4 65
to National Trotting Association	31 00
day and evening	264 00
& Candy, printing	14 00
"Publishing Company, advertising	55 00
"Publishing Company, printing and advertising	234 40
"Democrat," advertising	26 40
Ma Maria "Graphic," advertising	9 00
Ma Maria "Times," advertising	8 00
Alamos "Progress," advertising	7 50
Ma Barbara "Herald," advertising	10 00
	3 36
Fargo & Co., express charges	23 30
A. Perkins, ticket clerk	20 00
aris, gatekeeper	20 00
Garretson, gatekeeper	20 00
Ogden, gatekeeper	4 00
Farum, entry clerk	24 00
Everett, entry clerk	18 00
abb, police	12 00
artin, police	12 00
Packard, labor and teams	32 00
Maulsby, night watch	12 00
H. Kelton, doorkeeper	16 00
ackle, labor	17 00
carried forward	\$5,039 07

Amount brought forward	\$5,089 07
Paid A. Henkle, labor	25 75
Paid John Ewing, labor	50
Paid V. Lousely, labor	22 50
Paid Electric Light Company	25 00
Paid E. B. Chambers, silver cups	40 00
Paid Roeder & Ott, fountain	14 20
Paid M. F. Hamer, badges	3 75
Paid E. A. Conant, engraving	1 00
Paid M. Lloyd & Son, painting	3 50
Paid Noble & Hitchcock, cloth	7 63
Paid Austin & Trenwith, ribbon and cloth	26 02
Paid F. H. Knight, use of chairs	20 00
Paid Booth & Packard, nails, etc.	6 70
Paid Santa Barbara Lumber Company, lumber	45 50
Paid R. D. Cruikshank, "Experiment Station Exhibit," Paso Robles	36 00
Paid M. V. Robbins, team	2 00
Paid R. Machin, telegram	1 05
Paid G. C. Packard, labor and expenses	54 35
Paid T. & A. Goux, supplies	13 75
Paid H. B. Brastow, sundries	12 75
Paid First National Bank, interest	6 00
Paid Mrs. J. E. Shepherd, Superintendent Culinary Department	10 00
Paid Mrs. E. E. Packard, Superintendent Children's Department	10 00
Paid Mrs. M. E. Ashley, Superintendent Ladies' Department	10 00
Paid James Morgan, Superintendent Horse Department	24 00
Paid Charles P. Low, services	25 00
Paid E. C. Roeder, services	25 00
Paid A. Hayman, services	25 00
Paid R. Machin, services	25 00
Paid T. C. Nance, services	25 00
Paid D. M. Dimmick, services	25 00
Paid A. L. Lincoln, Treasurer, services	25 00
Paid Secretary, salary for 1890	300 00
Paid rent Pavilion and Fair grounds	300 00
Balance	849 30

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
HORSES—STALLIONS.			
and four colts	J. N. Johnson	Santa Barbara	\$15 00
	J. N. Johnson	Santa Barbara	\$20 00
	H. Delany	Santa Barbara	\$10 00
	J. N. Johnson	Santa Barbara	\$15 00
	M. S. Bryant	Santa Maria	\$20 00
MARES.			
	T. P. A. Williams	Santa Barbara	\$15 00
	J. N. Johnson	Santa Barbara	\$2 00
MARES—STALLIONS.			
and four colts	Z. T. Rucker	Lompoc	\$15 00
	Z. T. Rucker	Lompoc	\$20 00
	H. W. Lawrence	Santa Barbara	\$10 00
	R. A. Stewart	Santa Barbara	\$10 00
	H. Delaney	Santa Barbara	\$6 00
	H. Delaney	Santa Barbara	\$4 00
	Z. T. Rucker	Lompoc	\$2 00
	W. E. Johnson	Santa Barbara	\$2 00
MARES.			
	H. W. Lawrence	Santa Barbara	\$15 00
	A. W. Buell	Santa Barbara	\$3 00
	Z. T. Rucker	Lompoc	\$10 00
	Z. T. Rucker	Lompoc	\$6 00
	J. N. Johnson	Santa Barbara	\$5 00
	F. T. Packard	Montecito	\$3 00
	D. Carter	Santa Barbara	\$3 00
HORSES—STALLIONS.			
	John Peyster	Carpenteria	\$20 00
	A. H. Phillips	Goleta	\$10 00
	W. E. Johnson	Santa Barbara	\$5 00
	William Fischer	Lompoc	\$6 00
	A. H. Phillips	Goleta	\$3 00
	A. Callens	Hueneme	Sil. med.
MARES.			
	E. Doty	Santa Barbara	\$15 00
	E. Doty	Santa Barbara	\$8 00
	E. Doty	Santa Barbara	\$8 00
HORSES—STALLIONS.			
	N. Buckage	Santa Barbara	\$3 00
HORSES—STALLIONS.			
	M. V. Robbins	Goleta	\$20 00
	E. Field	Santa Ynez	\$10 00
	Z. T. Rucker	Lompoc	\$6 00
	W. M. Hicks	Santa Barbara	\$4 00
	Geo. N. Williams	Santa Barbara	\$2 00
MARES.			
	E. Doty	Santa Barbara	\$15 00
	E. Doty	Santa Barbara	\$6 00
HORSES.			
	T. M. Lewis	Goleta	\$8 00

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
MULES.		
Best span mules	John Peyster	Carpenteria
Second best	E. Catlett	Goleta
Best single mule	E. Catlett	Goleta
Second best	E. Catlett	Goleta
JACKS.		
Chief	E. Catlett	Goleta
Monarch	E. Catlett	Goleta
THOROUGHBRED JERSEYS—BULLS.		
Faunus	E. J. Packard	Santa Barbara
COWS.		
Czarina	E. J. Packard	Santa Barbara
Dot	E. J. Packard	Santa Barbara
Matilda	E. J. Packard	Santa Barbara
Exile	E. J. Packard	Santa Barbara
Ace	E. J. Packard	Santa Barbara
GRADED COWS.		
Cora	W. P. Sprout	Santa Barbara
Mollie	J. Longawa	Santa Barbara
	M. May	Santa Barbara
	W. P. Sprout	Santa Barbara
SWINE.		
Berkshire sow	A. H. Phillips	Goleta
Berkshire sow and pigs eight weeks old	A. H. Phillips	Goleta
Essex boar	J. Faulding	Santa Barbara
Essex sow	J. Faulding	Santa Barbara
Essex sow and pigs	J. Faulding	Santa Barbara
Poland boar	A. H. Phillips	Goleta
Poland sow	A. H. Phillips	Goleta
Poland sow and pigs	A. H. Phillips	Goleta
Graded sow	J. Faulding	Santa Barbara
Pen of pigs	J. Faulding	Santa Barbara
Sow and pigs	J. Faulding	Santa Barbara
Largest hog	A. H. Phillips	Goleta
POULTRY, ETC.		
Buff Cochins	S. S. Seeley	Santa Barbara
Buff Cochins	S. S. Seeley	Santa Barbara
Plymouth Rocks	Jas. Morgan	Santa Barbara
Plymouth Rocks	Jas. Morgan	Santa Barbara
Silver-spangled Hamburgs	A. Hayman	Santa Barbara
Game fowls	O. M. Covarrubias	Santa Barbara
Langshans	T. P. A. Williams	Santa Barbara
Bantams	Phil. B. Case	Santa Barbara
Bantams	O. M. Covarrubias	Santa Barbara
Turkeys	C. N. Leete	Santa Barbara
Largest turkey	J. N. Hilter	Santa Barbara
Pekin ducks	T. P. A. Williams	Santa Barbara
Pekin ducks	T. P. A. Williams	Santa Barbara
Ducks	T. P. A. Williams	Santa Barbara
Ducks	T. P. A. Williams	Santa Barbara
Fancy pigeons	N. J. Saunders	Santa Barbara
Fancy pigeons	E. J. Packard	Santa Barbara
Canaries	S. S. Seeley	Santa Barbara
Canaries	C. N. Leete	Santa Barbara
Guinea pigs	M. May	Santa Barbara
Rabbits	E. J. Packard	Santa Barbara

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—FARM PRODUCTS.			
Box of farm products	C. N. Leete	Santa Barbara	\$15 00
Box of garden products	G. N. Williams	Santa Barbara	\$15 00
Box of corn	A. H. Phillips	Goleta	\$3 00
Box of corn in the ear	A. H. Phillips	Goleta	\$3 00
Box of corn stalk	D. M. Dimmick	Carpenteria	\$1 50
Box of corn stalk	D. M. Dimmick	Carpenteria	\$3 00
Box of corn	S. Rutherford	Goleta	\$1 50
Box of corn	Henry Fish	Carpenteria	\$3 00
Box of corn on stalk	C. N. Leete	Santa Barbara	\$1 50
Box of corn on stalk	Hattie Fish	Carpenteria	\$3 00
Box of corn shelled	D. M. Dimmick	Carpenteria	\$1 50
Box of corn shelled	D. M. Dimmick	Carpenteria	\$3 00
Box of corn shelled	Henry Fish	Carpenteria	\$1 50
Box of corn shelled	H. Langman	Goleta	\$3 00
Box of corn shelled	S. Rutherford	Goleta	\$1 50
Box of corn shelled	C. N. Leete	Santa Barbara	\$1 00
Box of corn shelled	H. Langman	Goleta	\$0 50
Box of corn shelled	C. N. Leete	Santa Barbara	\$1 00
Box of corn shelled	D. M. Dimmick	Carpenteria	\$3 00
Box of corn shelled	C. N. Leete	Santa Barbara	\$3 00
Box of corn shelled	H. Langman	Goleta	\$3 00
Box of corn shelled	C. N. Leete	Santa Barbara	\$3 00
Box of corn shelled	C. N. Leete	Santa Barbara	\$3 00
Box of corn shelled	D. Peterson	Santa Barbara	\$1 50
Box of corn shelled	H. Langman	Goleta	\$3 00
Box of corn shelled	U. Yndart	Santa Barbara	\$3 00
Box of corn shelled	H. Fish	Carpenteria	\$3 00
Box of corn shelled	C. N. Leete	Santa Barbara	\$3 00
Box of corn shelled	A. J. Kennedy	Santa Maria	\$3 00
Box of corn shelled	S. Rutherford	Goleta	\$1 00
Box of corn shelled	C. N. Leete	Santa Barbara	\$2 00
Box of corn shelled	A. H. Phillips	Goleta	\$2 00
Box of corn shelled	C. N. Leete	Santa Barbara	\$1 00
Box of corn shelled	Experiment Station	Paso Robles	Sil. med.
DAIRY PRODUCTS.			
Box of butter	J. B. Shaw	Los Alamos	\$10 00
Box of butter	J. H. Rice	Santa Maria	\$5 00
Box of butter	L. G. Oliver	Santa Barbara	\$7 00
Box of butter	D. Peterson	Santa Barbara	\$3 00
Box of butter	E. Stafford	Santa Barbara	\$1 00
MISCELLANEOUS PRODUCTS.			
Box of bacon	L. G. Oliver	Santa Barbara	\$5 00
Box of olives	W. F. Spring	Santa Barbara	\$2 00
Box of honey	O. W. Maulsby	Santa Maria	\$2 00
Box of plumes	J. Sexton	Goleta	\$2 00
Box of plumes	M. A. Bliss	Santa Barbara	\$2 00
Box of plumes	E. L. Tyler	Santa Maria	\$2 00
Box of plumes	C. N. Leete	Santa Barbara	\$1 00
Box of plumes	C. N. Leete	Santa Barbara	\$1 00
BAKERY DEPARTMENT.			
Box of cake	Mrs. W. P. Sprout	Santa Barbara	\$6 00
Box of cake	Mrs. D. Peterson	Santa Barbara	\$3 00
Box of cake	Mrs. Frank Packard	Montecito	\$1 00
Box of cake	Mrs. N. M. Packard	Montecito	\$1 00
Box of cake	Mrs. N. M. Packard	Montecito	\$1 00
Box of cake	Mrs. N. M. Packard	Montecito	\$1 00
Box of cake	Mrs. N. M. Packard	Montecito	\$4 00
Box of cake	Mrs. H. Fish	Carpenteria	\$1 00
Box of cake	Mrs. E. Stafford	Santa Barbara	\$0 50
Box of cake	Mrs. H. Fish	Carpenteria	\$1 00
Box of cake	Mrs. N. M. Packard	Montecito	\$0 50
Box of cake	Mrs. D. M. Dimmick	Carpenteria	\$3 00
Box of cake	Mrs. D. M. Dimmick	Carpenteria	\$1 00
Box of cake	Mrs. D. M. Dimmick	Carpenteria	\$1 00
Box of cake	Mrs. D. M. Dimmick	Carpenteria	\$1 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best orange jelly	Mrs. D. M. Dimmick	Carpenteria
Best loquat jelly	Mrs. D. M. Dimmick	Carpenteria
Best quince jelly	Mrs. N. Bassett	Santa Barbara
Best apple jelly	Mrs. N. Bassett	Santa Barbara
Best apricot jelly	Mrs. J. E. Shepherd	Montecito
Best Hamburg grape jelly	Mrs. Annie Seely	Santa Barbara
Best strawberry jelly	Mrs. N. M. Packard	Montecito
Best cherry plum jelly	Mrs. N. M. Packard	Montecito
Best red currant jelly	Mrs. N. M. Packard	Montecito
Best pear jelly	Mrs. N. M. Packard	Montecito
Best guava jelly	Mrs. N. M. Packard	Montecito
Best wild blackberry jelly	Mrs. J. E. Shepherd	Montecito
Best canned peaches	Mrs. J. E. Shepherd	Montecito
Best canned strawberries	Mrs. J. E. Shepherd	Montecito
Best canned prunes	Mrs. N. M. Packard	Montecito
Best canned currants	Mrs. N. M. Packard	Montecito
Best canned plums	Mrs. N. M. Packard	Montecito
Best canned grapes	Mrs. N. M. Packard	Montecito
Best canned raspberries	Mrs. N. M. Packard	Montecito
Best canned cherries	Mrs. N. M. Packard	Montecito
Best raspberry jam	Mrs. J. E. Shepherd	Montecito
Best plum jam	Mrs. N. M. Packard	Montecito
Best grape jam	Mrs. A. Seely	Santa Barbara
Best blackberry jam	Mrs. W. S. Spring	Montecito
Best fig jam	Mrs. W. S. Spring	Montecito
Best tomato jam	Mrs. W. S. Spring	Montecito
Best sweet pickles	Mrs. J. E. Shepherd	Montecito
Best preserved oranges	Mrs. N. M. Packard	Montecito

LADIES' DEPARTMENT.

Best knitted rug	Mrs. S. A. Hayman	Santa Barbara
Second best	Miss Alice Havens	Goleta
Best drawn rug	Mrs. E. C. Gallbreath	Santa Barbara
Best braided rug	Mrs. J. E. Shepherd	Montecito
Best rug of any kind	Mrs. H. P. Butler	Santa Barbara
Best quilted bedspread	Mrs. H. E. Marcy	Santa Barbara
Second best	Mrs. W. W. Pearce	Santa Barbara
Best crochet bedspread	Mrs. R. L. Booth	Santa Barbara
Best knitted bedspread	Mrs. Lucy A. Brown	Santa Barbara
Second best	Mrs. Annie Seely	Santa Barbara
Best crazy bedspread	Mrs. J. M. DeLaGuerra	Santa Barbara
Second best	Mrs. W. H. Earle	Santa Barbara
Best embroidered bedspread	Mrs. Wm. Buck	Santa Maria
Best afghan	Mrs. S. A. Hayman	Santa Barbara
Best arrasene embroidery	Mrs. N. Fish	Santa Barbara
Best silk embroidery	Mrs. N. Fish	Santa Barbara
Best wool embroidery	Mrs. H. P. Butler	Santa Barbara
Best outline embroidery	Miss R. A. Everett	Goleta
Best embroidery (linen or cotton)	Mrs. J. M. DeLaGuerra	Santa Barbara
Second best	Mrs. M. Lowe	Santa Barbara
Best tatting	Miss Fanny E. Davis	Santa Barbara
Second best	Mrs. F. Burbank	Santa Barbara
Best crochet edging	Miss Fanny E. Davis	Santa Barbara
Second best	Mrs. F. Burbank	Santa Barbara
Best crochet garment	Mrs. A. B. Coblenz	Santa Barbara
Second best	Miss Mary Maguire	Santa Barbara
Best crochet shawl	Miss Mary Maguire	Santa Barbara
Second best	Mrs. M. L. Morgan	Montecito
Best knitted garment	Mrs. A. Seely	Santa Barbara
Second best	Mrs. Clara Baker	Santa Barbara
Best knitted edging or lace	Mrs. F. Burbank	Santa Barbara
Second best	Mrs. L. C. Camp	Santa Barbara
Best Spanish drawn work	Miss J. DeLaGuerra	Santa Barbara
Second best	Mrs. O. Covarrubias	Santa Barbara
Best antique lace	Miss F. E. Davis	Santa Barbara
Second best	Mrs. F. Burbank	Santa Barbara
Best point or honiton lace	Miss A. McNealy	Santa Barbara
Second best	Mrs. J. H. Summers	Santa Barbara
Best shell flowers	Mrs. W. W. Pearce	Santa Barbara
Second best	Mrs. O. Covarrubias	Santa Barbara

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
flowers	Miss L. Lambert	Montecito	\$2 00
work	Miss D. Mascolini	Santa Barbara	\$1 00
work on card	Miss B. Rood	Santa Barbara	\$2 00
design	Miss F. E. Davis	Santa Barbara	\$2 00
hand sewing	Miss E. T. Rush	Santa Barbara	\$2 00
hand sewing	Miss F. E. Davis	Santa Barbara	\$1 00
hand sewing	Mrs. J. A. Ogden	Carpenteria	\$3 00
hand sewing	Mrs. W. W. Pearce	Santa Barbara	\$1 50
hand sewing	Mrs. A. Lloyd	Santa Barbara	\$2 00
hand sewing	Mrs. A. Cafferini	Santa Barbara	\$2 00
hand sewing	Mrs. Wm. Buck	Santa Maria	\$1 00
hand sewing	Miss M. Walbridge	Santa Barbara	\$2 00
hand sewing	Mrs. A. Seely	Santa Barbara	\$1 00
hand sewing	Miss R. A. Everett	Goleta	\$3 00
hand sewing	Miss D. Mascolini	Santa Barbara	\$2 00
hand sewing	Mrs. J. H. Summers	Santa Barbara	\$1 00
hand sewing	Mrs. W. W. Pearce	Santa Barbara	\$2 00
hand sewing	Mrs. J. E. Shepherd	Montecito	\$2 00
hand sewing	Miss F. E. Davis	Santa Barbara	\$2 00
hand sewing	Miss J. De la Guerra	Santa Barbara	\$1 00
hand sewing	Miss L. Crawford	Santa Barbara	\$2 00
hand sewing	Mrs. F. Burbank	Santa Barbara	\$2 00
hand sewing	Mrs. A. E. Willson	Santa Barbara	\$2 00
hand sewing	Mrs. E. M. Goss	Santa Barbara	\$2 00
hand sewing	Miss J. Wahlquist	Santa Barbara	\$1 00
hand sewing	R. Mascolini	Santa Barbara	\$2 00
hand sewing	Mrs. W. W. Pearce	Santa Barbara	\$1 00
hand sewing	Miss F. E. Davis	Santa Barbara	\$2 00
hand sewing	Mrs. A. Cafferini	Santa Barbara	\$2 00

LADIES' DEPARTMENT.

best display	Miss A. Strathern	Santa Barbara	\$5 00
best display	Miss A. Strathern	Santa Barbara	\$3 00
best display	Miss Lena McLain	Santa Barbara	\$1 50
best display	Miss Ethel Wheaton	Santa Barbara	\$2 00
best display	Miss Della Smith	Santa Barbara	\$2 00
best display	Miss A. Covarrubias	Santa Barbara	\$2 00
best display	Miss Emily Fish	Carpenteria	\$1 00
best display	Miss B. McFarland	Santa Barbara	\$2 00
best display	Miss A. Covarrubias	Santa Barbara	\$2 00
best display	Miss Mattie Snell	Santa Barbara	\$1 00
best display	Miss Hattie Fish	Carpenteria	\$3 00
best display	Miss Olive Wyant	Santa Barbara	\$2 00
best display	Miss A. J. Brundage	Santa Barbara	\$1 00
best display	Richard Aubrey	Santa Barbara	\$2 00
best display	Miss A. H. Smith	Santa Barbara	\$1 00
best display	Miss A. Covarrubias	Santa Barbara	\$2 00
best display	Miss Olive Wyant	Santa Barbara	\$2 00
best display	Miss Lily Peterson	Santa Barbara	\$1 00
best display	Miss R. Meigs	Santa Barbara	\$2 00
best display	Miss M. Peterson	Santa Barbara	\$1 00
best display	Miss Daisy De Pue	Montecito	\$3 00
best display	Miss Cora L. Spring	Santa Barbara	\$1 50
best display	Miss B. McFarland	Santa Barbara	\$2 00
best display	Miss Helen Meigs	Santa Barbara	\$2 00
best display	Charles Sprout	Santa Barbara	\$2 00
best display	Ruel Tolman	Santa Barbara	\$1 00
best display	Yris Covarrubias	Santa Barbara	\$2 00
best display	Miss M. Peterson	Santa Barbara	\$2 00
best display	Miss Lily Peterson	Santa Barbara	\$1 00
best display	Edward Dowel	Santa Barbara	\$1 00
best display	Miss C. L. Spring	Santa Barbara	\$1 00
best display	Miss A. Strathern	Santa Barbara	\$1 00
best display	Muriel Wheaton	Santa Barbara	\$0 50

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
SANTA BARBARA PUBLIC SCHOOL CHILDREN.		
Neatness of work, including penmanship	Miss Varner's class	Santa Barbara
Second award	Mattie Snell	Santa Barbara
Best drawing	H. M. Cadwell's class	Santa Barbara
Second best	Mr. Gardner's class	Santa Barbara
For entomological collections, with drawings and descriptions of insects.	Miss Leland's class	Santa Barbara
Second award	Miss Mattie Wright	Santa Barbara
For botanical drawings and collection.	Miss L. Sexton	Santa Barbara
Second award	Miss Rockwell's class	Santa Barbara
For zoological drawings, with collections and history of each specimen.	Edward Raney	Santa Barbara
Second award	Mr. Hamilton's class	Santa Barbara
For modeling in clay	Mr. Gardner's class	Santa Barbara
For best exhibit of primary work of first and second years	Mr. H. Webb's class	Santa Barbara
Second award	Miss Case's class	Santa Barbara
For best exhibit of primary work of third and fourth years.	Mr. H. Webb's class	Santa Barbara
Second award	Mr. Hamilton's class	Santa Barbara
For best exhibit of primary work of fifth and sixth years.	Mr. H. Webb's class	Santa Barbara
Second award	Mr. Hamilton's class	Santa Barbara
For best exhibit of primary work of seventh and eighth years.	Miss Varner's class	Santa Barbara
Second award	Mr. Metcalf's class	Santa Barbara
FINE ARTS.		
Best landscape in oil	Mrs. J. Ingham	Santa Barbara
Best exhibit of photographs	M. Lowe	Santa Barbara
Best exhibit of architectural drawings.	Hardy & Hardy	Santa Barbara
FINE ARTS—AMATEURS.		
Best portrait in oil	Mrs. Y. A. Storke	Santa Barbara
Best landscape in oil	Mrs. A. E. West	Santa Barbara
Best flowers in oil	Miss C. M. Moore	Santa Barbara
Best pencil drawing	Miss Alice Severns	Santa Barbara
Best painting on velvet	Miss D. Rutherford	Santa Barbara
Best painting on silk	Mrs. A. B. Coblenz	Santa Barbara
Best penmanship	Russell Park	Santa Barbara
MANUFACTURES OF THIS COUNTY.		
Best pair calf boots	Johnston & Burson	Santa Barbara
Articles made of California wood	S. A. Barker	Santa Barbara
Mantels and decorative work	Thomas Nixon	Santa Barbara
Saddle	S. Loomis	Santa Barbara
Stamped leather work	S. Loomis	Santa Barbara
Washing machine	N. D. Rood	Santa Barbara
Plumbing	Booth & Packard	Santa Barbara
Electricians	Brunett & Hall	Santa Barbara
MUSICAL INSTRUMENTS.		
Pianos and organs	Lord & Spence	Santa Barbara
BABIES.		
Prettiest baby over six months old	Edna Peterson	Santa Barbara
Next prettiest baby over six months old	James Smith	Santa Barbara
Prettiest baby under six months old	Lulu May Sewell	Santa Barbara
Next prettiest baby under six months old	Roy Grimes	Santa Barbara
MERCHANDISE.		
Best display of fancy goods	W. A. Judge	Santa Barbara
Best display of hardware	Booth & Packard	Santa Barbara
Best display of agricultural implements	Whitney & Wicken-	Los Alamos
Best display of guns and sporting articles	Booth & Packard	Santa Barbara
Best display of artists' materials	W. A. Judge	Santa Barbara

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Display of books and stationery	W. A. Judge	Santa Barbara	Diploma.
Display of boots and shoes	Johnson & Burson	Santa Barbara	Diploma.
Display of sewing machines	Emerson & Co.	Santa Barbara	Diploma.
Display of buggies and carts	Southern M. & W. Co.	Santa Barbara	Diploma.
MINERALS.			
Display of pearls	J. E. Goux	Santa Barbara	Sil. med.
FRUITS.			
Display of products of orchard	Geo. N. Williams	Santa Barbara	\$15 00
Display of apples	D. M. Dimmick	Carpenteria	\$5 00
Display of peaches	M. A. Bliss	Santa Barbara	\$2 00
Display of plums and prunes	D. M. Dimmick	Carpenteria	\$3 00
Display of grapes	Henry Fish	Carpenteria	\$3 00
Display of blackberries	D. M. Dimmick	Carpenteria	\$1 50
Display of oranges	C. N. Leete	Goleta	\$3 00
Display of lemons	M. A. Bliss	Santa Barbara	\$1 50
Display of dried apples	W. F. Spring	Santa Barbara	\$2 00
Display of dried peaches	D. M. Dimmick	Carpenteria	\$1 00
Display of dried nectarines	J. E. Shepherd	Santa Barbara	\$3 00
Display of dried apricots	N. M. Packard	Montecito	\$1 50
Display of pears	N. M. Packard	Montecito	\$3 00
Display of figs	D. M. Dimmick	Carpenteria	\$3 00
Display of white nectarines	D. M. Dimmick	Carpenteria	\$3 00
Display of dates	D. M. Dimmick	Carpenteria	\$3 00
Display of quinces	D. M. Dimmick	Carpenteria	\$3 00
Display of dried plums	S. K. Shilling	Lompoc	\$1 00
Display of dried prunes	J. J. Holloway	Santa Barbara	\$5 00
Display of flowering plants	M. A. Bliss	Santa Barbara	\$2 00
Display of flowers	Mrs. Wm. Hudson	Santa Barbara	\$2 00
Display of palms in boxes	M. A. Bliss	Santa Barbara	\$2 00
Display of ferns in boxes	S. K. Shilling	Lompoc	\$3 00
Display of cut flowers	D. M. Dimmick	Carpenteria	\$1 00
Display of bouquet	S. K. Shilling	Lompoc	\$2 00
Display of bouquet	Jos. Sexton	Goleta	\$5 00
Display of bouquet	John Spence	Santa Barbara	\$5 00
Display of bouquet	Jos. Sexton	Goleta	\$5 00
Display of bouquet	John Spence	Santa Barbara	\$2 00
Display of bouquet	Mrs. Jos. Sexton	Goleta	\$2 00
Display of bouquet	Mrs. Jos. Sexton	Goleta	\$2 00
Display of bouquet	Mrs. Jos. Sexton	Goleta	\$1 00
Display of bouquet	Mrs. Jos. Sexton	Goleta	\$3 00
Display of bouquet	Mrs. Jos. Sexton	Goleta	\$1 00

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 23, 1890.

RACE NO. 1—RUNNING.

Purse, one hundred and fifty dollars. Half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sid Law, b. g., by Robbery Boy; dam, Lillian.	E. R. Den.	Santa Barbara.
Comet, ch. s., by Robbery Boy; dam, Anellane's mare	J. B. Anellane	Santa Barbara.
Belle, s. m., by Newry; dam, Mayflower	E. B. Hill	Lompoc.

SUMMARY.

Comet	1 1
Sid Law	2 2
Belle	3 3

Time—0:49½; 0:50.

RACE NO. 2—TROTTING.

For yearling colts. Purse, five hundred and eighty dollars. Half mile heats, best in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lottery, b. c., by Elector; dam, by Captain Webster	H. Delaney	Santa Barbara.
White Cloud, w. c., by Bashaw; dam, Kitty Pease	Z. T. Rucker	Santa Barbara.
Santa Barbara, b. c., by Don Patricio; dam, Fanny	I. K. Fisher	Santa Barbara.
Bashaw, Jr., b. c., by Bashaw; dam, by Black Hawk Comet, Jr.	J. C. McReynolds	Santa Barbara.
Excelsior, s. c., by Bashaw; dam, by Anderson	C. Sullivan	Santa Barbara.
Harry Stamboul, b. c., by Stamboul; dam, Carrie B.	E. R. Den.	Santa Barbara.
Orphan Girl, b. f., by Cashmir; dam, Queen	J. N. Johnson	Santa Barbara.

SUMMARY.

Harry Stamboul	1
Bashaw, Jr.	3
Lottery	2
Excelsior	4
White Cloud	5

Time—1:46½; 1:43½.

RACE NO. 3—TROTTING.

Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Beach, b. s., by Bashaw; dam, by Wilkes	H. Beach	Lompoc.
George, ch. s., by Byron; dam, American	J. H. Williams	Naples.
Low & Wilson	Low & Wilson	Santa Barbara.
Pilot, blk. s., by Sultan; dam, by	Z. T. Rucker	Lompoc.
James Mack	James Mack	Santa Paula.
Charles Lee	Charles Lee	San Luis Obispo.
Brown & Taylor	Brown & Taylor	San Luis Obispo.
H. Mulholland	H. Mulholland	Santa Paula.
C. L. Woods	C. L. Woods	San Luis Obispo.

SUMMARY.

Jack Pilot	2 1 2 1 1
George	1 2 1 2 2
Fanny Beach	5 3 3 3 3
Low & Wilson	3 4 5 4 4
W. W.	6 5 4 5 5
W. Toole	7 6 dis.
W. Sam	4 dis.

Time—2:45½; 2:39½; 2:38½; 2:39½; 2:37.

WEDNESDAY, SEPTEMBER 24, 1890.

RACE NO. 4—RUNNING.

For yearling colts owned and raised in Santa Barbara County. Purse, one hundred and fifty dollars. Half mile dash.

Name and Pedigree of Horse.	By Whom Entered.	Address.
W. g., by Accident; dam, Santa	C. E. Sherman	Santa Barbara.
W. g., by Accident; dam,	John Rutherford	Goleta.
W. m., by Robbery Boy; dam,	B. H. Benson	Los Olivos.

SUMMARY.

W. g.	1
W. g.	2
W. m.	3

Time—0:50½.

RACE No. 5—TROTTING.

For two-year olds. Purse, one hundred and fifty dollars. Mile heats, best three in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Phoenix, blk s., by Altoona; dam, unknown	B. Parker	Los Angeles
Emory, blk. c., by Rucker; dam, by Dexter	Z. T. Rucker	Los Angeles
Redwood, s. g., by Glenwood; dam, Susie	A. W. Buell	Santa Barbara
Nellie, b. m., by Bashaw; dam, by Dexter	H. Delaney	Santa Barbara

SUMMARY.

Emory	1 2 1
Phoenix	2 1 3
Nellie	3 3 2

Time—3:04; 2:59½; 2:53½.

RACE No. 7—TROTTING.

For stallions owned in San Luis Obispo, Santa Barbara, and Ventura Counties. Purse, three hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Bashaw, b. s., by Wapsy; dam, by Owen Dale	R. Bennett	Los Angeles
Rosewald, g. s., by Richmond; dam, by Creighton	H. Delaney	Santa Barbara
Don Patricio, g. s., by Richmond; dam, Bridget	I. K. Fisher	Santa Barbara
Commodore Nutwood, b. s., by Nutwood; dam, by George M. Patchen	E. B. Hill	Los Angeles
Alpheus, b. s., by Mambrino Wilkes; dam, Rose	H. D. Albright	San Luis Obispo

SUMMARY.

Rosewald	1 1 2 1
Bashaw	2 2 1 3
Don Patricio	dia.

Time—2:42; 2:38½; 2:32½; 2:32½.

THURSDAY, SEPTEMBER 25, 1890.

RACE No. 8—RUNNING.

Purse, one hundred and fifty dollars. Three quarters of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Consuelo, b. s., by Grinstead; dam, Nina R.	E. R. Den	Santa Barbara
Othello, b. s., by Hock Hocking; dam, Sunday	E. R. Den	Santa Barbara
Moses B, ch. s., by Leinster; dam, Aunt Jane	M. S. Bryant	Santa Barbara
Comet, ch. s., by Robbery Boy; dam, Anellane's mare	J. B. Anellane	Santa Barbara
Belle, s. m., by Newry; dam, Mayflower	E. B. Hill	Los Angeles

SUMMARY.

Comet	1
Moses B	3
Othello	2
Belle	4

Time—1:16½; 1:17½.

RACE No. 9—TROTTING.

For two-year olds. Purse, one hundred and fifty dollars. Mile heats, best three in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Phoenix, blk. c., by Bashaw; dam, by Belmont	H. Delaney	Santa Barbara
Emory, blk. c., by Bashaw; dam, by Dexter	Z. T. Rucker	Lompoc
Redwood, s. g., by Corbet; dam, Bridget	Jas. Mack	Santa Paula
Nellie, b. m., by Gaviota; dam, unknown	C. L. Woods	San Luis Obispo

SUMMARY.

Phoenix	1 1 1
Emory	2 2 2
Nellie	3 3 3

Time—2:42; 2:43½; 2:43½.

RACE No. 10—TROTTING.

Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Phoenix, blk. c., by Dan Rice; dam, Susie	A. H. Buell	Santa Barbara
Emory, blk. c., by Whipple's Hambletonian; dam, Patchen	Jas. Mack	Santa Paula
Redwood, s. g., by Bashaw; dam, by George M. Patchen	Z. T. Rucker	Lompoc
Alpheus, b. s., by Mambrino Wilkes; dam, Rose	R. A. Stewart	Santa Barbara
Comet, ch. s., by Chieftain; dam, unknown	Chas. Lee	San Luis Obispo
Belle, b. m., by Monroe Chief; dam, Rose	Brown & Taylor	San Luis Obispo
Phoenix, blk. c., by Algona; dam, by Gen.	J. B. Paulin	Springville
Nellie, b. m., by Richmond; dam, Nellie	L. Lahman	Hueneme

SUMMARY.

Phoenix	4 1 1 1
Emory	1 2 2 4
Redwood	2 3 3 2
Nellie	3 4 4 3

Time—2:34½; 2:34; 2:51; 2:50½.

Heats trotted on the twenty-sixth in the mud.

FRIDAY, SEPTEMBER 26, 1890.

RACE No. 11—RUNNING.

Purse, one hundred dollars. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Phoenix, blk. c., by Hock Hocking; dam, Sunday	E. R. Den	Santa Barbara
Emory, blk. c., by Grinstead; dam, Nina R.	E. R. Den	Santa Barbara
Redwood, s. g., by Arthur; dam, Estella	J. G. Hill	Ventura
Nellie, b. m., by Leinster; dam, Aunt Jane	M. S. Bryant	Santa Maria

TRANSACTIONS OF NINETEENTH DISTRICT ASSOCIATION.

SUMMARY.

Moses B	1	1
Sid	2	2 1/2
Othello	3	3 1/2

Time—1:51 1/2; 1:52.

RACE No. 12—RUNNING.

Purse, one hundred and twenty-five dollars. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Black Bart, blk. g., by Accident; dam, unknown	John Rutherford	Col.
Birdie N, b. f., by Wildidle; dam, Phoebe Hall	J. G. Hill	Vent.
Lathrop Belle, g. f., by Bryant W; dam, by Joe Davis	J. N. Ferguson	Santa Bar.

SUMMARY.

Birdie N	1
Black Bart	2

Time—1:24 3/4.

TRANSACTIONS

OF THE

NINETEENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of Placer.

REPORT.

OFFICERS OF THE ASSOCIATION.

AUBURN, December 1, 1890.

JO HAMILTON
F. D. ADAMS
T. J. NICHOLS

Honorable the State Board of Agriculture:

MEMBERS: The Directors of the Twentieth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

F. D. ADAMS,
Secretary.

DIRECTORS.

JO HAMILTON
W. B. LARDNER
J. C. BOGGS
W. D. PERKINS
W. M. BAKER
G. W. TOWLE
H. T. POWER

RECEIPTS AND EXPENDITURES.

Receipts.

Admission of supply wagons	\$4 00
Sale of entry cards	278 00
Admission of tickets at Pavilion	371 75
Admission of tickets at Park	381 25
Newspaper of privileges at Park	90 00
Refund of privileges at Pavilion	23 00
Refund of Committee on Subscription	23 00
	<u>\$1,151 00</u>

Expenditures.

Payroll (including entry clerks, ticket sellers, etc.)	\$672 85
Permanent improvements at Park	165 25
Freight, and express	43 55
Printing and advertising	244 85
	195 48
	100 00
	100 00
Of Pavilion	112 74
Handicraft	309 66
	1,875 00
	<u>\$3,539 38</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—THOROUGHBREDS—STALLIONS.			
Nick of the Woods, three years old and over	W. H. Dunston	Rocklin	
Ophir, two years old	W. H. Gusha	Ophir	
MARES.			
Peggy, three years old and over	W. H. Gusha	Ophir	
CLASS II—STANDARD TROTTERS—STALLIONS.			
California Prince, three years old and over	B. Burr	Applegate	
Duke of Cameo, three years old and over	A. Herold	Lincoln	
General Burr, one year old	H. Warren	Applegate	
California Prince, Jr., under one year.	J. Millett	Clipper Gap	
MARES.			
Fanny, three years old and over	Mrs. Wm. Barter	Penryn	
Lady Annie, under one year	Mrs. Wm. Barter	Penryn	
CLASS III—HORSES OF ALL WORK.			
Monarch, three years old and over	John Gould	Roseville	
Daisy, three years old and over	W. McIntosh	Roseville	
Bird, three years old and over	Wright & Roumage	Auburn	
Prince, two years old	C. A. Johnson	Auburn	
CLASS IV—ROADSTERS—STALLIONS.			
Elmo, three years old and over	E. H. Honn	Clipper Gap	
Scalune, two years old	W. H. Gusha	Ophir	
Black Tim, one year old	J. S. Shepherd	Auburn	
Abbott, one year old	George May	Auburn	
Joe, under one year	Wright & Roumage	Auburn	
MARES.			
Pet, three years old and over	William Wilkins	Auburn	
Baby, one year old	R. T. Sutton	Auburn	
Queenie, one year old	E. E. Gates	Auburn	
Foxy, under one year	Mrs. Davis	Auburn	
GELDING.			
Prince	J. Viemier	Auburn	
CLASS V—DRAFT HORSES—STALLIONS.			
Cornet, four years old and over	Placer Co. Breeding Association	Colfax	
General, four years old and over	W. McIntosh	Roseville	
Romeo, one year old and over	George May	Auburn	
CLASS VI—DRAFT MARES.			
Gray Bess, four years old and over	J. S. Shepherd	Auburn	
Mollie, four years old and over	John Stout	Auburn	
Nellie, three years old	B. Bernhard	Auburn	
Belle, two years old	C. Henny	Ophir	
CLASS VII—CARRIAGE HORSES, ETC.			
Span of carriage horses	W. H. Houchin	Auburn	
Single horse	A. Hoffman	Auburn	
Saddle horse	C. H. Slade	Auburn	

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS VIII—SWEEPSTAKES.			
(stallion)	W. McIntosh	Roseville	\$10 00
(mare)	John Stout	Auburn	\$10 00
(gelding)	J. B. Patterson	Auburn	\$10 00
CLASS IX—JACKS.			
	J. Hutchinson	Ophir	\$15 00
CLASS I—JERSEYS AND ALDERNETS—BULLS.			
three years old and over	W. H. Curtis	Auburn	\$10 00
COWS.			
one year old	Mrs. E. Roberson	Auburn	\$3 00
one year old and over	Mrs. E. Roberson	Auburn	\$7 50
one year old	Peter Hansen	Auburn	\$6 00
CLASS II—DURHAMS—BULLS.			
three years old and over	L. Armbruster	Auburn	\$10 00
three years old and over	C. H. Slade	Auburn	\$3 00
two years old	George Perkins	Newcastle	\$10 00
two years old	James Cook	Auburn	\$7 50
COWS.			
three years old and over	James Cook	Auburn	\$7 50
CLASS III—HOLSTEINS—BULLS.			
Young calf	L. Armbruster	Auburn	Diploma.
CLASS IV—GRADED COWS.			
one year old and over	A. N. Hoffman	Auburn	\$30 00
one year old	J. N. Hayes	Auburn	\$7 50
one year old	J. B. Meredith	Auburn	\$6 00
one year old	Frank Bratcher	Auburn	\$5 00
one year old	M. Lowell	Auburn	\$3 00
CLASS II—BERKSHIRE.			
months old	John Vehmeier	Auburn	\$5 00
months old	John Predom	Auburn	\$3 00
POULTRY, ETC.			
hens	Miss M. Robinson	Auburn	\$3 00
hens	John Predom	Auburn	\$3 00
hens	E. H. Honn	Clipper Gap	\$3 00
hens	Mrs. H. Nesenhoener	Auburn	\$3 00
hens	Oscar Houchin	Auburn	\$3 00
hens	R. T. Sutton	Auburn	\$3 00
hens	James Breslin	Auburn	\$3 00
hens	J. L. Lane	Auburn	\$3 00
hens	J. L. Lane	Auburn	\$3 00
hens	J. L. Lane	Auburn	\$3 00
hens	J. L. Lane	Auburn	\$3 00
hens	George Perkins	Newcastle	\$3 00
hens	J. Vehmeier	Auburn	\$5 00
hens	Frank Lewis	Auburn	\$3 00
hens	Miss M. Roberson	Auburn	\$3 00

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS III.		
Bee hive.....	E. B. Beecher.....	Auburn.....
Tray for drying raisins.....	E. B. Beecher.....	Auburn.....
CLASS V—VEHICLES MADE IN DISTRICT.		
Wagon.....	J. Haeny.....	Lincoln.....
Spring wagon.....	J. Haeny.....	Lincoln.....
Buggy.....	J. Haeny.....	Lincoln.....
Buckboard.....	J. G. Bisbee & Son.....	Auburn.....
Rifle box.....	Charles Trafton.....	Yankee Jim's.....

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Double harness.....	O. Mallory.....	Auburn.....
Single harness.....	O. Mallory.....	Auburn.....
Bridles.....	O. Mallory.....	Auburn.....
CLASS III.		
Candlestick.....	H. G. Allomory.....	Auburn.....
Blacksmith work.....	D. Kirby.....	Auburn.....
CLASS IV.		
Spring bed.....	Coker & McElwee.....	Auburn.....
Mattress.....	Coker & McElwee.....	Auburn.....
CLASS V.		
Doors.....	Towle Bros. & Co.....	Auburn.....
Blinds.....	Towle Bros. & Co.....	Auburn.....
Sash.....	Towle Bros. & Co.....	Auburn.....
Wood pulp.....	Towle Bros. & Co.....	Auburn.....
Brooms.....	George Dudley.....	Auburn.....
Lumber.....	Towle Bros. & Co.....	Auburn.....
Carpenter work.....	W. S. Skellinger.....	Clipper Gap.....
Bur frame.....	Walter Jacobs.....	Auburn.....
Fruit baskets.....	S. F. Woodworth.....	Clipper Gap.....
MISCELLANEOUS.		
Clay brick.....	G. F. Halsey.....	Auburn.....
Lapidary work.....	A. Keller.....	Auburn.....

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Silk embroidery.....	Mrs. W. M. Crutcher.....	Auburn.....
Cotton embroidery.....	Mrs. A. Musso.....	Auburn.....
Embroidery.....	Mrs. G. L. Peach.....	Auburn.....
Outline embroidery.....	Mrs. W. D. Perkins.....	Rocklin.....
Table cover.....	Mrs. F. Millikin.....	Penryn.....
Table scarf.....	Mrs. W. H. Houchin.....	Auburn.....
Chair seat.....	Mrs. W. B. Hayford.....	Colfax.....
Banner.....	Miss D. Barkhaus.....	Lincoln.....
Picture embroidery.....	Mrs. Millikin.....	Penryn.....
Lace.....	Mrs. M. A. Preston.....	Gold Run.....
Ribbon work.....	Mrs. Nellie Ray.....	Auburn.....
Stockings.....	Mrs. C. Ludwig.....	Auburn.....

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
work.....	Mrs. James Tufts.....	Auburn.....	\$2 50
work.....	Mrs. N. H. Karchner.....	Sheridan.....	\$5 00
work.....	Miss D. Barkhaus.....	Lincoln.....	\$2 00
work.....	Mrs. W. R. Arthur.....	Auburn.....	\$3 00
work.....	Miss Cora Siefert.....	Auburn.....	\$2 50
work.....	Miss Kate Russell.....	Auburn.....	\$2 50
work.....	E. T. Robie.....	Auburn.....	\$2 50
work.....	Miss J. Chamberlain.....	Auburn.....	\$2 00
work.....	Miss J. S. Quire.....	Auburn.....	\$2 00
work.....	Miss B. Fellows.....	Auburn.....	\$1 50
work.....	Miss N. L. Karchner.....	Sheridan.....	\$1 50
work.....	Miss I. M. Power.....	Auburn.....	\$1 50
work.....	Miss W. H. Sawyer.....	Auburn.....	\$1 00
work.....	Miss Nellie Davis.....	Lincoln.....	\$1 00
work.....	Mrs. Nellie Ray.....	Auburn.....	\$1 00
work.....	Mrs. W. M. Crutcher.....	Auburn.....	\$2 50
work.....	Mrs. Arthur.....	Auburn.....	\$2 00
work.....	Miss Jessie Stone.....	Auburn.....	\$3 00
work.....	Mrs. James Shea.....	Auburn.....	\$3 00
work.....	Mrs. Ed. Polifka.....	Michigan Bluff.....	\$1 50
work.....	Mrs. E. Peardon.....	Ophir.....	\$1 50
work.....	Mrs. G. W. Threlkel.....	Newcastle.....	\$1 50
work.....	Miss B. Gassner.....	Auburn.....	\$2 00
work.....	Mrs. J. B. Wetherker.....	Forest Hill.....	\$2 50
work.....	Miss Nellie Ray.....	Auburn.....	\$2 00
work.....	Mrs. L. L. Chamberlain.....	Auburn.....	\$1 00
work.....	Mrs. Sutton.....	Auburn.....	\$1 00
CLASS II.			
work.....	Mrs. C. M. Trask.....	Auburn.....	\$5 00
work.....	Miss Lucy Romero.....	Auburn.....	\$5 00
work.....	Anna M. Lininger.....	Auburn.....	\$3 00
work.....	Effie Hayford.....	Auburn.....	\$2 00
work.....	Dolly McCormick.....	Auburn.....	\$1 00
CLASS V.			
work.....	H. A. Nesenhoener.....	Auburn.....	\$10 00
work.....	H. A. Nesenhoener.....	Auburn.....	\$5 00
CLASS VII.			
work.....	G. Schwallenberg.....	Penryn.....	\$10 00
work.....	D. Griffiths.....	Penryn.....	\$7 50
MISCELLANEOUS.			
work.....	Emily Roberson.....	Auburn.....	\$5 00

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
work.....	Mrs. C. Ludwig.....	Auburn.....	\$5 00
work.....	Miss Nellie Davis.....	Lincoln.....	\$3 00
work.....	W. D. Gould.....	Roseville.....	\$5 00
work.....	O. D. Storrs.....	Auburn.....	\$5 00
work.....	E. Hurlburt.....	Auburn.....	\$5 00
work.....	T. W. McCarthy.....	Auburn.....	\$2 50
CLASS II.			
work.....	S. Laycock.....	Auburn.....	\$2 50
work.....	S. Reese.....	Auburn.....	\$1 50
work.....	A. Johnson.....	Auburn.....	\$2 50
work.....	Mrs. J. Hamilton.....	Auburn.....	\$1 00
work.....	T. B. Gibson.....	Auburn.....	\$2 50
work.....	E. B. Beecher.....	Auburn.....	\$2 50

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Egyptian corn	T. B. Gibson	Auburn	
Onions	J. K. Correa	Newcastle	
Sweet potatoes	E. L. Hawk	Rocklin	
Sweet potatoes	T. B. Gibson	Auburn	
Tomatoes	Mrs. C. Ludwig	Auburn	
Tomatoes	W. H. Curtis	Auburn	
Cabbage	O. D. Storrs	Auburn	
Cabbage	Mrs. J. Hamilton	Auburn	
Sweet corn	D. Hamilton	Auburn	
Popcorn	W. H. Curtis	Auburn	
Popcorn	T. B. Gibson	Auburn	
Watermelons	O. D. Storrs	Auburn	
Watermelons	T. B. Gibson	Auburn	
Largest watermelon	T. B. Gibson	Auburn	
Muskmelons	O. D. Storrs	Auburn	
Muskmelons	Mrs. J. Hamilton	Auburn	
Muskmelons	P. Oest	Auburn	
Cantaloupes	J. M. Kirk	Auburn	
Cantaloupes	J. K. Correa	Newcastle	
Carrots	Mrs. J. Hamilton	Auburn	
Carrots	O. D. Storrs	Auburn	
Cucumbers	E. H. Honn	Clipper Gap	
Cucumbers	Mrs. A. M. Lininger	Auburn	
Beets, stock	O. D. Storrs	Auburn	
Beets, stock	Mrs. J. Hamilton	Auburn	
Beets, table	Claude Shepherd	Auburn	
Beets, table	John Stout	Auburn	
Squash	O. D. Storrs	Auburn	
Squash	J. M. Kirk	Auburn	
Largest squash	J. May	Auburn	
Beans	R. T. Sutton	Auburn	
Beans	T. B. Gibson	Auburn	
Best and largest display of vegetables	Mrs. J. Hamilton	Auburn	
Second best	T. B. Gibson	Auburn	
CLASS III.			
Flowering plants	A. F. Boardman	Auburn	
Flowering plants	Mrs. F. Grohs	Auburn	
Ornamental plants	A. F. Boardman	Auburn	
Ornamental plants	Mrs. F. Grohs	Auburn	
Hanging baskets	A. F. Boardman	Auburn	
Cut flowers	Albert Locher	Auburn	
Ferns	A. T. Boardman	Auburn	
Floral design	Mrs. H. F. Calenberg	Auburn	
Floral design	Mrs. F. J. Locher	Auburn	
Grain in sheaf	George Perkins	Newcastle	
Grain in sheaf	Mrs. C. Ludwig	Auburn	
Hops	Mrs. G. Armstrong	Auburn	
Tea plants	Mrs. E. Roberson	Auburn	
Tobacco plants	H. Nesenhoener	Auburn	
CLASS IV.			
Jar of butter	Mrs. H. Robinson	Auburn	
CLASS V.			
Bread	Mrs. J. C. Safford	Auburn	
Bread	Mrs. A. K. Robinson	Auburn	
Biscuit	Belle McCormick	Auburn	
Brown bread	Mrs. E. C. Williford	Auburn	
Graham bread	Mrs. E. C. Williford	Auburn	
Wheat bread	Mrs. E. Barker	Auburn	
Doughnuts	Mrs. E. Barker	Auburn	
Doughnuts	Mrs. E. C. Williford	Auburn	
Display of bread	Mrs. A. A. Pettingill	Auburn	

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
	H. Runckle	Auburn	\$10 00
	W. H. Curtis	Auburn	\$5 00
	P. Oest	Auburn	\$2 50
	O. D. Storrs	Auburn	\$10 00
	W. H. Curtis	Auburn	\$5 00
	H. B. Gaylord	Auburn	\$2 50
	P. Heilbrun	Auburn	\$10 00
	George Perkins	Newcastle	\$5 00
	G. W. Threlkel	Auburn	\$2 50
	G. F. Halsey	Auburn	\$10 00
	H. H. Pillsbury	Auburn	\$5 00
	Mrs. Minnie Irwin	Colfax	\$2 50
	H. B. Gaylord	Auburn	\$5 00
	C. Henny	Ophir	\$3 00
	G. W. Armstrong	Auburn	\$2 00
	George Perkins	Newcastle	\$5 00
	C. T. Adams	Newcastle	\$3 00
	Ira Avery	Newcastle	\$2 00
	J. W. Hulbert	Auburn	\$10 00
	E. E. Hulbert	Auburn	\$5 00
	W. J. Wilson	Newcastle	\$5 00
	C. M. Delamater	Newcastle	\$3 00
	H. B. Gaylord	Auburn	\$2 00
	T. B. Gibson	Auburn	\$5 00
	C. T. Adams	Newcastle	\$3 00
	J. K. Correa	Newcastle	\$2 00
	Mrs. E. Roberson	Auburn	\$5 00
	Auburn O. G. Ass'n	Auburn	\$5 00
	Auburn O. G. Ass'n	Auburn	\$5 00
	E. B. Beecher	Auburn	\$5 00
	T. B. Gibson	Auburn	\$3 00
	E. W. Maslin	Loomis	\$2 00
	E. L. Hawk	Rocklin	\$15 00
	C. T. Adams	Newcastle	\$10 00
	P. Oest	Auburn	\$5 00
	J. K. Correa	Newcastle	\$10 00
	J. P. Armes & Bro.	Newcastle	\$5 00
	W. D. Gould	Roseville	\$2 50
	E. L. Hawk	Rocklin	\$2 50
	E. W. Maslin	Loomis	\$15 00
	P. Oest	Auburn	\$3 00
	J. K. Correa	Newcastle	\$10 00
	Kate Deetkin	Auburn	\$5 00
	J. W. Barker	Auburn	\$3 00
	W. H. Houchin	Auburn	\$3 00
CLASS II.			
	Mrs. E. Roberson	Auburn	\$3 00
	William Foster	Lincoln	\$3 00
	Miss Nellie Morrill	Auburn	\$4 00
	C. M. Delamater	Newcastle	\$3 00
	C. M. Delamater	Newcastle	\$5 00
	Mrs. H. H. Pillsbury	Auburn	\$5 00
	C. M. Delamater	Newcastle	\$2 00
	C. M. Delamater	Newcastle	\$2 00
	Miss Nellie Morrill	Auburn	\$5 00
	C. M. Delamater	Newcastle	\$10 00
	W. Foster	Lincoln	\$5 00
	C. M. Delamater	Newcastle	\$10 00
CLASS III.			
	A. F. Boardman	Auburn	\$7 50
	A. Johnson	Auburn	\$2 50
	J. W. Lee	Newcastle	\$2 50
	J. W. Hulbert	Auburn	\$2 50
	H. B. Gaylord	Auburn	\$2 00
	G. D. Kellogg	Newcastle	\$5 00

SIXTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS IV.			
Honey.....	E. B. Beecher.....	Auburn.....	
Preserves.....	Mrs. W. B. Lardner.....	Auburn.....	
Pickles.....	Mrs. E. B. Beecher.....	Auburn.....	
Jelly.....	Mrs. W. B. Lardner.....	Auburn.....	
Jelly.....	Mrs. E. L. Hawk.....	Rocklin.....	
Sealed fruit.....	Mrs. E. H. Honn.....	Clipper Gap.....	
Display of fruits, nuts, etc.....	George D. Kellogg.....	Newcastle.....	

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Landscape painting.....	Mrs. M. T. Robie.....	Auburn.....	
Painting (fruit).....	Mrs. S. B. Burt.....	Auburn.....	
Portrait painting.....	Miss D. Willitts.....	Auburn.....	
Painting (flowers).....	Mrs. B. Cromwell.....	Rocklin.....	
Painting on bolting cloth.....	Mrs. F. De Gomez.....	Auburn.....	
Best collection of paintings.....	Miss Susie Gordan.....	Auburn.....	
Painting on china.....	Miss B. Kirk.....	Auburn.....	
Painting on porcelain.....	Miss M. Conroy.....	Auburn.....	
CLASS II.			
Landscape drawing.....	Mrs. B. Cromwell.....	Rocklin.....	
Crayon drawing.....	Miss D. Willitts.....	Auburn.....	
India ink drawing.....	J. E. Uren.....	Dutch Flat.....	
Pen drawing.....	Ella Gibson.....	Auburn.....	
Best display of crayon work.....	Miss M. Hamilton.....	Auburn.....	
JUVENILE.			
Oil painting.....	Nellie Beecher.....	Auburn.....	
Oil painting.....	Frank Bettan.....	Auburn.....	
CRAYON DRAWINGS.			
Landscape.....	Mabel Huntley.....	Auburn.....	
Landscape.....	B. Dunlap.....	Auburn.....	
Landscape.....	A. Locher.....	Auburn.....	
Landscape.....	L. M. Burns.....	Auburn.....	
Landscape.....	R. Service.....	Auburn.....	
Landscape.....	Cora Mallory.....	Auburn.....	
Pencil drawing.....	Nellie Beecher.....	Auburn.....	
Map drawing.....	E. Uren.....	Dutch Flat.....	
MAP DRAWING BY SCHOOL CHILDREN.			
.....	Cora Mallory.....	Auburn.....	
.....	L. Hayford.....	Auburn.....	
.....	Dutch Flat School.....	Dutch Flat.....	
.....	Edgewood School.....	Edgewood.....	
.....	Valley View School.....	Valley View.....	

MISCELLANEOUS.

Exhibit.	Exhibitor.	Address.	Award.
.....	A. Keena.....	Auburn.....	\$5 00
.....	C. Hulbert.....	Auburn.....	\$5 00
.....	F. Pelster.....	Auburn.....	\$5 00
.....	E. Fowler.....	Auburn.....	\$5 00
.....	A. Herrill.....	Auburn.....	\$5 00
.....	Clara Johnson.....	Auburn.....	\$5 00
.....	Ida Johnson.....	Auburn.....	\$5 00
.....	H. Kaiser.....	Auburn.....	\$5 00
.....	G. Woolridge.....	Auburn.....	\$5 00
.....	S. Robinson.....	Auburn.....	\$5 00
.....	L. Service.....	Auburn.....	\$5 00
.....	B. Greenfield.....	Auburn.....	\$5 00
.....	Baby Seavey.....	Auburn.....	\$5 00
.....	J. Stout.....	Auburn.....	\$2 50
.....	J. Stout.....	Auburn.....	\$3 00
.....	Mrs. E. Peardon.....	Ophir.....	\$1 00
.....	Mrs. Jessie Flournoy.....	Auburn.....	\$7 50
.....	Miss D. Willitts.....	Auburn.....	\$5 00
.....	Miss K. Deetkin.....	Auburn.....	\$5 00
.....	Miss M. Tuttle.....	Auburn.....	\$3 00
.....	C. A. Johnson.....	Auburn.....	\$5 00
.....	Hoffman Bros.....	Auburn.....	\$10 00
.....	Jno. Vehmeier.....	Auburn.....	\$10 00
.....	H. Stone.....	Auburn.....	\$5 00
.....	Kate Deetkin.....	Auburn.....	\$8 00
.....	Cora Johnson.....	Auburn.....	\$4 00
.....	May Meredith.....	Auburn.....	\$3 00
.....	Ike Saunders.....	Auburn.....	\$10 00
.....	P. H. Haughn.....	Auburn.....	\$5 00
.....	Fred. Birdsall.....	Auburn.....	\$10 00
.....	H. Stone.....	Auburn.....	\$5 00
.....	Ike Saunders.....	Auburn.....	\$13 00
.....	I. P. Haughn.....	Auburn.....	\$10 00

TRANSACTIONS

OF THE

SEVENTY-FIRST DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Mariposa, Merced, and Fresno.

REPORT.

FRESNO, December 9, 1890.

OFFICERS OF THE ASSOCIATION.

LEWIS LEACH President
N. I. BALDWIN Secretary
FARMERS BANK Treasurer

Honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Twenty-first District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

N. I. BALDWIN,
Secretary.

DIRECTORS.

LEWIS LEACH
WILLIAM M. HUGHES
V. C. W. HOOPER
I. J. BUCKLEY
J. F. McSWAIN
C. A. WARFIELD
W. C. OSTRANDER
J. M. CORCORAN

RECEIPTS AND EXPENDITURES.

Receipts.

License fees—purses	\$5,225 00
License fees	10 00
Grass	4,376 98
Land	3,630 75
Market fees—stock	715 75
Interest	318 00
Other	2,500 00
	<u>\$16,772 48</u>

Expenditures.

Twenty-first District Agricultural Association	\$1,250 00
.....	8,330 00
.....	1,007 25
.....	250 00
.....	104 00
.....	10 00
.....	845 35
.....	277 50
.....	34 50
.....	525 00
.....	1,089 00
	<u>\$13,772 60</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—THOROUGHBREDS.			
Zingarella	R. P. Ashe	Merced	
CLASS II—STANDARD-BRED TROTTERS.			
Cloviss	S. N. Straube	Fresno	
Poplar Boy	S. N. Straube	Fresno	
Mattie	S. N. Straube	Fresno	
Millie H.	S. N. Straube	Fresno	
Valley View Maid	S. N. Straube	Fresno	
CLASS III—GENERAL PURPOSE—FAMILIES.			
Cloviss and five of his get	S. N. Straube	Fresno	
Buccaneer, Jr., and five of his get	J. A. Waterman	Fresno	
CLASS IV—DRAFT HORSES.			
Tom	P. Barr	Dinuba	
Illiers	W. J. Prather	Fresno	
CLASS V—ROADSTERS.			
Buccaneer, Jr.	J. A. Waterman	Fresno	
Lee Patchen	Chas. Endicott	Kingsburg	
Daisy	W. J. Caldwell	Fresno	
SPECIAL—CLEVELAND BAYS.			
Lord Hartington	W. J. Prather	Fresno	
Roseleaf	W. J. Prather	Fresno	
Rillington Lassie	W. J. Prather	Fresno	
Loyalty	W. Wilkinson	Fresno	
CLASS VII—ROADSTER TEAMS.			
Team	G. A. Dodge	Hanford	
CLASS VIII—GENERAL PURPOSES.			
Paragon	F. G. Berry	Fresno	
General Lee	M. Cotton	Sanger	
CLASS IX—COLTS.			
Aaron	R. Moore	Wildflower	
Lulu C.	S. N. Straube	Fresno	
Earl	S. N. Straube	Fresno	
Poplar Girl	S. N. Straube	Fresno	
CLASS X—SWEEPSTAKES.			
Junio	S. N. Straube	Fresno	
Mattie	S. N. Straube	Fresno	
CATTLE—CLASS I—DURHAMS.			
5th Kirklevington of Forest Home	C. Younger & Son	San José	
44th Kirklevington of Forest Home	C. Younger & Son	San José	
Belle's Duke of Forest Home	C. Younger & Son	San José	
Rose's Duke of Forest Home	C. Younger & Son	San José	
14th Rose of Forest Home	C. Younger & Son	San José	
21st Rose of Forest Home	C. Younger & Son	San José	
12th Oxford Rose of Forest Home	C. Younger & Son	San José	
Jessie Maynard	C. Younger & Son	San José	
Oxford Rose 16th	C. Younger & Son	San José	

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II—POLLED ANGUS.			
Boy	Ferguson & Austin	Fresno	\$10 00
Boy	Ferguson & Austin	Fresno	\$5 00
Prince of Wildflower	Ferguson & Austin	Fresno	\$5 00
Boy	Ferguson & Austin	Fresno	\$3 00
Boy	Ferguson & Austin	Fresno	\$10 00
CLASS III—HEREFORDS.			
Boy	L. D. Scott	Clifton	\$10 00
Boy	L. D. Scott	Clifton	\$5 00
Boy	L. D. Scott	Clifton	\$3 00
Boy	L. D. Scott	Clifton	\$5 00
CLASS VIII—HERDS.			
Hartington and four cows	C. Younger & Son	San José	\$20 00
CLASS IX—SWEEPSTAKES.			
Hartington	C. Younger & Son	San José	\$20 00
Maynard	C. Younger & Son	San José	\$20 00
Boy	Ferguson & Austin	Fresno	\$20 00
Hartington and three calves	C. Younger & Son	San José	\$20 00
CLASS I—GRADED CATTLE.			
Boy	L. D. Scott	Clifton	\$5 00
Boy	C. Younger & Son	San José	\$8 00
CLASS II—POLAND-CHINA AND CHESTER WHITES.			
Boy	W. J. Prather	Fresno	\$10 00
Boy	J. Shepard	Fresno	\$10 00
Boy	J. Shepard	Fresno	\$10 00
Boy	J. Shepard	Fresno	\$10 00
CLASS III—SWEEPSTAKES.			
Boy	J. Shepard	Fresno	\$10 00
Boy	J. Shepard	Fresno	\$10 00
Boy	F. G. Berry	Fresno	\$10 00
POULTRY.			
Boy	D. Disumkes	Fresno	\$1 00
Boy	F. G. Berry	Fresno	\$1 00
Boy	William Gifford	Fresno	\$1 00
Boy	William Gifford	Fresno	\$1 00
Boy	M. Dwyer	Fresno	\$1 00
Boy	William Gifford	Fresno	\$1 00
Boy	William Gifford	Fresno	\$9 00

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—TEXTILE FABRICS.			
Boy	Mrs. W. F. Plate	Fresno	\$2 00
Boy	Mrs. W. E. Chesley	Fresno	\$1 00
Boy	Mrs. J. O. Colwell	Fresno	\$1 00
Boy	Mrs. J. O. Colwell	Fresno	\$1 00
Boy	Mrs. J. O. Colwell	Fresno	\$1 00
Boy	Mrs. J. O. Colwell	Fresno	\$1 00
Boy	Mrs. J. O. Colwell	Fresno	\$5 00
Boy	Mrs. L. Mix	Fresno	\$1 00
Boy	Mrs. L. Mix	Fresno	\$1 00
Boy	Mrs. L. Mix	Fresno	\$1 00
Boy	Mrs. L. Mix	Fresno	\$1 00
Boy	Mrs. S. C. Waltz	Fresno	\$2 00
Boy	Mrs. S. C. Waltz	Fresno	\$2 00
Boy	Mrs. S. C. Waltz	Fresno	\$1 00

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
PAINTINGS, DRAWINGS, ETC.			
Portrait	Mrs. J. L. Connor	Fresno	\$2 00
Life size	Mrs. J. L. Connor	Fresno	\$2 00
Oil painting	Mrs. J. L. Connor	Fresno	\$3 00
Study	J. P. Pyott	Fresno	\$2 00
Display of penmanship	Fresno College	Fresno	\$2 00
On canvas	Mrs. S. Sackville	Fresno	\$3 00
Water painting	Mrs. S. Sackville	Fresno	\$2 00
Spring	Mrs. W. N. Snow	Fresno	\$1 00
In plaster	Mrs. W. N. Snow	Fresno	\$2 00
Black drawing	H. L. York	Fresno	\$2 00
	Mrs. M. J. Buchanan	Fresno	\$2 00
	Mrs. M. J. Buchanan	Fresno	\$2 00
Painting	Mrs. W. T. Shelton	Fresno	\$2 00
Drawing	Mrs. W. T. Shelton	Fresno	\$2 00
On nature	Mrs. W. T. Shelton	Fresno	\$1 00
Painting	Mrs. W. T. Shelton	Fresno	\$1 00
Painting	Mrs. S. C. Waltz	Fresno	\$2 00
Water painting	Mrs. S. C. Waltz	Fresno	\$2 00
	Mrs. S. C. Waltz	Fresno	\$2 00
Work	Mrs. S. C. Waltz	Fresno	\$2 00
Water painting	Mrs. S. C. Waltz	Fresno	\$2 00
Painting	Mrs. S. C. Waltz	Fresno	\$1 00
Of etching	Mrs. S. C. Waltz	Fresno	\$2 00
Figure	Mrs. S. C. Waltz	Fresno	\$2 00
Scene	Mrs. J. F. Daulton	Madera	\$2 00
Painting	Mrs. J. F. Daulton	Madera	\$2 00
Plaque	Mrs. J. F. Daulton	Madera	\$1 00
Fruit (a painting)	Mrs. M. F. Lefler	Fresno	\$1 00
	Mrs. M. F. Lefler	Fresno	\$1 00
Bow of roses (a painting)	Mrs. M. F. Lefler	Fresno	\$1 00
Flowers (a painting)	Mrs. M. F. Lefler	Fresno	\$1 00
Of porcelain paintings	Mrs. M. F. Lefler	Fresno	\$2 00
Collection of paintings	Mrs. M. F. Lefler	Fresno	\$20 00

Exhibit.	Exhibitor.	Address.	Award.
PRESERVES, PICKLES, ETC.			
Box of preserves, pickles, etc.	Mrs. S. C. Waltz	Fresno	\$30 00
Raspberry jelly	Mrs. S. C. Waltz	Fresno	\$2 00
Black currant jelly	Mrs. S. C. Waltz	Fresno	\$2 00
Black currant jelly	Mrs. S. C. Waltz	Fresno	\$2 00
Raspberry jelly	Mrs. S. C. Waltz	Fresno	\$2 00
Strawberry jelly	Mrs. S. C. Waltz	Fresno	\$2 00
Rhubarb jelly	Mrs. S. C. Waltz	Fresno	\$2 00
Blackberry jam	Mrs. S. C. Waltz	Fresno	\$2 00
Preserves	Mrs. S. C. Waltz	Fresno	\$5 00
Pickles	Mrs. S. C. Waltz	Fresno	\$2 00
Jelly	Mrs. S. C. Waltz	Fresno	\$2 00
	Mrs. S. C. Waltz	Fresno	\$2 00
	Mrs. S. C. Waltz	Fresno	\$2 00
	Mrs. S. C. Waltz	Fresno	\$2 00
	Mrs. S. C. Waltz	Fresno	\$2 00
Apple fritters	Mrs. S. C. Waltz	Fresno	\$2 00

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
FRUITS.			
Display of apples.....	W. A. Cowan.....	Fresno.....	1st
Display of pears.....	W. A. Cowan.....	Fresno.....	2nd
Display of plums.....	W. A. Cowan.....	Fresno.....	3rd
Display of quinces.....	Thomas Hawes.....	Fresno.....	4th
Six varieties apples.....	A. Littlefield.....	Pine Ridge.....	5th
Three varieties apples.....	A. Littlefield.....	Pine Ridge.....	6th
Three varieties pears.....	Wm. Wilkerson.....	Fresno.....	7th
Three varieties peaches.....	Wm. Wilkerson.....	Fresno.....	8th
Display of dried peaches.....	Mrs. W. N. Snow.....	Fresno.....	9th
Display of dried figs.....	M. Denike.....	Fresno.....	10th
CLASS II—AGRICULTURAL PRODUCTS.			
Egyptian corn.....	W. A. Cowan.....	Fresno.....	11th
Exhibit of squashes.....	J. R. Ferguson.....	Fresno.....	12th
Exhibit of cut flowers.....	Mrs. N. M. Young.....	Fresno.....	13th

MISCELLANEOUS DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
One hundred and fifty pounds of raisins.....	Ray White.....	Fresno.....	14th
Display of raisins.....	B. R. Woodworth.....	Fresno.....	15th
Big tree bark.....	Charles A. Lee.....	Fresno.....	16th
Ornithology of California.....	J. V. Colwell.....	Fresno.....	17th

SPEED PROGRAMME.

RACE No. 1—TROTTING.

...ing colts. One half mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Bismarck, Jr.....	C. Nany.....	Hanford.
by Waterford.....	A. D. Farley.....	Kingsburg.
Wilkes, by Napa Wilkes.....	M. Brayman.....	Selma.
Girl, by Clovis.....	S. N. Straube.....	Fresno.

SUMMARY.

by.....	1
by Fool.....	2
Wilkes.....	3
Girl.....	4

Time—1:39; 1:35½; 1:34.

RACE No. 2—TROTTING.

Class. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Admiral; dam, Black Flora.....	Napa Stock Farm.....	Napa.
by Tom Benton; dam, Brown Jennie.....	J. L. McCord.....	Sacramento.
by Sidney; dam, Nettie Lambert.....	San Mateo Stock Farm.....	San Mateo.

SUMMARY.

Water V.....	1
Mary Lou.....	2
Don Y.....	3

Time—2:27; 2:22½; 2:25½.

RACE No. 3—RUNNING.

and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Shiloh; dam, Margery.....	W. L. Appleby.....	Santa Clara.
by Kingston; dam, Black Maria.....	Owens Bros.....	Fresno.
by Flood; dam, Mozelle.....	Maltese Villa Stable.....	Merced.
by Wheatly; dam, Black Maria.....	Owens Bros.....	Fresno.

SUMMARY.

by.....	1
by D.....	2
by Al.....	3
by.....	4

Time—2:09.

RACE No. 4—TROTTING.

For two-year olds. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Elise, by Clovis; dam, Ida Davis	S. N. Straube	
Clarence G, by Barbero	W. Gates	
Lockford, by Waterford; dam, Locket	E. C. Adams	
Wickersham's Colt, by El Capitan; dam, Stella	F. P. Wickersham	

SUMMARY.

Elise	1
Wickersham's Colt	2
Lockford	3
Clarence G	4

Time—2:57½.

RACE No. 5—TROTTING.

2:35 Class. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Mountain Maid, by Anteo	J. Goldsmith	San Mateo
Aleric	H. H. Hellman	San Mateo
St. Joe, by Junio	S. N. Straube	San Mateo
Sidney J, by Revolution; dam, by Friday	C. F. Taylor	Nevada

SUMMARY.

Sidney J	1
St. Joe	2
Mountain Maid	3
Aleric	4

Time—2:30; 2:26½; 2:25½; 2:23.

RACE No. 6—RUNNING.

Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Acclaim, by Three Cheers; dam, Rosette	G. H. Kennedy	San Mateo
Judge Terry, by Ed Corrigan	Maltese Villa Stable	San Mateo
Alfarata, by Wildidle; dam, by Monday	W. L. Appleby	San Mateo

SUMMARY.

Acclaim	1
Alfarata	2
Judge Terry	3

Time—1:18.

RACE No. 7—TROTTING.

Three-year olds. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Thorn, by Nephew; dam, Fannie	S. N. Straube	Fresno.
by Waterford; dam, Betsy	W. J. Dickey	Fresno.
by Raymond; dam, by Alta	L. C. Smith	Fresno.
Chief, by Monroe Chief; dam, Ella	H. H. Hellman	Visalia.

SUMMARY.

Richmond Chief	1
by Pastore	2
by Thorn	3
by Raymond	4

Time—2:41; 2:44; 2:44; 2:41½; 2:42½; 2:42.

RACE No. 8—PACING.

Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Wilkes; dam, Sable Hayward	San Mateo Stock Farm	San Mateo.
Alice, by Dexter Prince; dam, Mollie	John Patterson	Linden.
	John Garrity	San Francisco.

SUMMARY.

by Wilkes	1
Alice	2
by Raymond	3

Time—2:19; 2:16½; 2:18.

RACE No. 9—RUNNING.

Mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Glen Ellen; dam, Queen	F. M. Starkey	Salem, Oregon.
	H. D. Miller	San Francisco.
by Wildidle; dam, Dottie Dimple	A. Bertrandis	Snelling.
	G. Walters	Los Angeles.

SUMMARY.

by Glen Ellen	1
by Wildidle	2
by Raymond	3

Time—0:49½; 0:49½; 0:50.

RACE No. 10—TROTTING.

2:30 Class. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
St. Joe, by Junio.....	S. N. Straube.....	From.....
Barbero.....	Owens Bros.....	From.....
Maud Singleton.....	P. J. Williams.....	Sacramento.....

SUMMARY.

St. Joe.....	1
Maud Singleton.....	2
Barbero.....	3

RACE No. 11—RUNNING.

One and three eighths miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Daisy D, by Wheatly; dam, Black Maria.....	Owens Bros.....	From.....
Mozart, by Flood; dam, Mozelle.....	Maltese Villa Stable.....	From.....
Raindrop, by Wildidle; dam, imp. Teardrop.....	W. L. Appleby.....	Santa Clara.....
Captain Al, by Kingston; dam, Black Maria.....	Owens Bros.....	From.....

SUMMARY.

Raindrop.....	1
Daisy D.....	2
Mozart.....	3
Captain Al.....	4

Time—2:26.

RACE No. 12—RUNNING.

One fourth of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Cyclone.....	F. M. Starkey.....	Salem, Oregon.....
Sleepy Fred.....	T. A. Ripperdan.....	From.....
Spring Water.....	F. Work.....	Yuma.....
Redlight.....	A. Bertrandis.....	San Diego.....
Little Confidence.....	J. H. Walker.....	Wildflower.....

SUMMARY.

Cyclone.....	1
Spring Water.....	2
Little Confidence.....	3

Time—0:23½; 0:23.

RACE No. 14—TROTTING.

Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wilkes.....	San Mateo Stock Farm.....	San Mateo.
Y.....	D. Mizner.....	Petaluma.
Y.....	Napa Stock Farm.....	Napa.

SUMMARY.

Unc Wilkes.....	1
Y.....	2
Mittie P.....	3

Time—2:26; 2:25½; 2:27½.

RACE No. 15—PACING.

Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Medal.....	Napa Stock Farm.....	Napa.
.....	J. Garrity.....	San Francisco.
.....	H. H. Hellman.....	Visalia.

SUMMARY.

Gold Medal.....	1
Ernie.....	2
Barrie.....	dis.

Time—2:30; 2:26½; 2:25½; 2:23.

RACE No. 16—TROTTING.

Heat 2:15.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Medal.....	J. Goldsmith.....	San Francisco.

SUMMARY.

Medal.....	1
.....	2

Time—2:13.

RACE No. 17—TROTTING.

Heat 2:23.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Wilkes.....	J. Goldsmith.....	San Francisco.

SUMMARY.

Vida Wilkes 1
 Time 2
Time—2:26.

RACE No. 18—RUNNING.

Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Judge Terry	Maltese Villa Stable	Merced
Ida Glenn	H. D. Miller	San Francisco
Dan Murphy	Gus. Walters	Los Angeles
Alfarata	W. L. Appleby	Santa Clara

SUMMARY.

Alfarata 1
 Ida Glenn 2
 Judge Terry 3
 Dan Murphy 0
Time—1:15½.

RACE No. 19—TROTting.

Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Emma Temple	H. J. Agnew	Hillside
Homestake	Pleasanton Stock Farm	Pleasanton

SUMMARY.

Homestake 1
 Emma Temple 2
Time—2:20; 2:21; 2:17½.

RACE No. 20—TROTting.

To beat 2:20½.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Regal Wilkes	J. Goldsmith	San Francisco

SUMMARY.

Regal Wilkes 1
 Time 2
Time—2:17½.

RACE No. 21—TROTting.

Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
W. J. Singleton	C. F. Taylor	Nevada City.
Ed Locke	P. J. Williams	Sacramento.
	L. Shaner	Petaluma.

SUMMARY.

W. J. Singleton 1
 Ed Locke 2
 Time—2:26½; 2:27½; 2:28½; 2:31½.

TRANSACTIONS

OF THE

TWENTY-SECOND DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of San Diego.

REPORT.

Escondido, February 10, 1891.

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Twenty-second District Agricultural Association submit this, their report of the transactions of said Association, for the year ending this date.

W. W. HORINE,
Secretary.

OFFICERS OF THE ASSOCIATION.

L. STEADMAN President
W. W. HORINE Secretary
J. H. ANDERSON Treasurer

DIRECTORS.

W. W. STEWART San Diego
J. M. HARNEY County
FRANK A. KIMBALL National
CHESTER GUNN Escondido
L. STEADMAN San Diego
JOHN JUDSON Valley
W. H. H. DINWIDDIE Escondido
C. A. McDOUGALL National
H. McCOON National

RECEIPTS AND EXPENDITURES.

Receipts.

Amount in hands of Treasurer	\$0 09	
Amount of loans from Bank of Escondido	882 90	
Log and advertising	109 50	
Free money	670 00	
Tickets at gate	1,231 30	
Grand stand tickets	191 25	
Privileges	114 85	
Material	57 00	
Appropriation	2,000 00	
Premiums	73 75	
No. 7 (canceled)	3 50	
Bills	357 91	
		<u>\$5,692 05</u>

Expenditures.

Warrants of 1889	\$224 60	
Telegraphing, express, etc.	42 69	
Salaries of officers	67 20	
Tickets on tickets	4 25	
Log and advertising	368 00	
Free money	172 61	
Grand stand	1,847 50	
Unpaid	257 75	
Unpaid	900 00	
Grand gatekeepers	136 10	
Unpaid	171 00	
Unpaid	428 71	
Unpaid	799 25	
Unpaid	249 00	
Unpaid	25 00	
Amount in hands of Treasurer	39	
		<u>\$5,692 05</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

LIVE STOCK.

Exhibit.	Exhibitor.	Address.
Roadster gelding.....	D. B. McFadden.....	El Cajon.....
Guernsey bull.....	J. W. Cox.....	Twin Oaks.....
Guernsey cow, nine years old.....	J. W. Cox.....	Twin Oaks.....
Guernsey cow, one year old.....	J. W. Cox.....	Twin Oaks.....
Roadster stallion.....	Francisco Estudillo.....	San Jacinto.....
Jersey cow.....	E. J. Johnson.....	Fallbrook.....
Jersey bull.....	E. J. Johnson.....	Fallbrook.....
Roadster stallion.....	Henry Keith.....	San Diego.....
Roadster stallion.....	Jas. Hewson.....	Encinitas.....
Roadster stallion.....	Robt. Daley.....	Escondido.....
Trio Light, Brahma chickens.....	R. S. Cox & Bro.....	Twin Oaks.....
Trio Partridge Cochins.....	R. S. Cox & Bro.....	Twin Oaks.....
Standard-bred stallion.....	Carl Register.....	El Cajon.....
Roadster stallion colt.....	S. F. Woods.....	San Pasqual.....
Boar and sow.....	W. R. Farnsworth.....	Escondido.....
Saddle horse.....	Chas. Kelley.....	Buena.....
Roadster team.....	Chas. Kelley.....	Buena.....
Roadster mare, two years old.....	Chas. Kelley.....	Buena.....
Roadster mare colt.....	Chas. Kelley.....	Buena.....
Thoroughbred mare, two years old.....	Francisco Estudillo.....	San Jacinto.....
Thoroughbred suckling colt.....	C. H. Frew.....	San Diego.....
Standard-bred mare, eleven years old.....	C. H. Frew.....	San Diego.....
Standard-bred mare, two years old.....	C. H. Frew.....	San Diego.....
Trio Wyandotte chickens.....	D. Welty.....	Escondido.....
Trio White Leghorn chickens.....	D. Welty.....	Escondido.....
Standard-bred mare, three years old.....	S. D. Mason.....	Escondido.....
Jersey bull, six months old.....	John L. Grether.....	Buena.....
Draft stallion, three years old.....	H. H. Clark.....	Poway.....
Draft mare, seven years old.....	D. T. Oaks.....	Bernardo.....
Draft mare, two years old.....	D. T. Oaks.....	Bernardo.....
Mare, eight years old.....	D. T. Oaks.....	Bernardo.....
Mare, two years old.....	D. T. Oaks.....	Bernardo.....
Mare, one year old.....	D. T. Oaks.....	Bernardo.....
Pair Poland-China pigs.....	D. T. Oaks.....	Bernardo.....
Roadster mare, three years old.....	E. W. Squires.....	Buena.....
Stallion, three years old, and four of his get.....	E. W. Squires.....	Buena.....
Span of mules.....	Samuel Striplin.....	Valley Center.....
Draft stallion, two years old.....	Jas. Dukes.....	Nuevo.....
Guernsey bull, one year old.....	John Judson.....	San Pasqual.....
Jersey cow, two years old.....	John Judson.....	San Pasqual.....
Trio Plymouth Rock chickens.....	W. O. Smith.....	Escondido.....
Stallion, two years old.....	Samuel Antes.....	Valley Center.....
Jersey cow, one year old.....	Chas. Hottendooft.....	Escondido.....
Pair Rouen ducks.....	Mrs. F. M. Baker.....	Escondido.....
Pair Bronze turkeys.....	Mrs. F. M. Baker.....	Escondido.....
Stallion.....	San Pasqual H. B. A.....	San Pasqual.....

SECOND DEPARTMENT.

FRUITS.

Exhibit.	Exhibitor.	Address.	Award.
Christmas peaches.....	A. E. Juch.....	Wynola.....	\$1 00
Greenstein apples.....	James Wilson.....	Julian.....	\$1 00
Yellow apples.....	James Wilson.....	Julian.....	\$1 00
Lawyer apples.....	James Wilson.....	Julian.....	\$1 00
Full Pippin apples.....	John Ryan.....	Banner.....	\$1 00
Ryan's Seedling peaches.....	John Ryan.....	Banner.....	\$1 00
Smith's Cider apples.....	J. C. Ford.....	Wynola.....	\$1 00
Hungarian prunes.....	Mrs. A. Reel.....	Wynola.....	\$1 00
Small French prunes.....	Mrs. A. Reel.....	Wynola.....	\$1 00
Samson plums.....	Mrs. A. Reel.....	Wynola.....	\$1 00
Jack apples.....	Mrs. A. Reel.....	Wynola.....	\$1 00
English Redstreak apples.....	Mrs. A. Reel.....	Wynola.....	\$1 00
Red's Seedling apples.....	Mrs. A. Reel.....	Wynola.....	\$1 00
Rhode Island Greening apples.....	James Kelley.....	Julian.....	\$1 00
Richness of Oldenburg apples.....	D. D. Bailey.....	Banner.....	\$1 00
Ballena Late peaches.....	J. McG. Frasier.....	Ballena.....	\$1 00
Prunes.....	J. McG. Frasier.....	Ballena.....	\$1 00
King of Tompkins County apples.....	J. E. Hamilton.....	Julian.....	\$1 00
Alexander apples.....	J. E. Hamilton.....	Julian.....	\$1 00
Winter Pound pears.....	F. R. Sawday.....	Ballena.....	\$1 00
Christmas pears.....	F. R. Sawday.....	Ballena.....	\$1 00
German prunes.....	James Duffy.....	Julian.....	\$1 00
Waver plums.....	James Duffy.....	Julian.....	\$1 00
Monoma Seedling apples.....	James Duffy.....	Julian.....	\$1 00
Golden Blush apples.....	James Duffy.....	Julian.....	\$1 00
Striped Black apples.....	James Duffy.....	Julian.....	\$1 00
Best display of northern fruits.....	James Duffy.....	Julian.....	\$5 00
Christmas pears.....	L. N. Bailey.....	Wynola.....	\$1 00
Ballena's Late peaches.....	L. N. Bailey.....	Wynola.....	\$1 00
Ballena apples.....	L. N. Bailey.....	Wynola.....	\$1 00
Red's Seedling apples.....	Z. Quincey.....	Ballena.....	\$1 00
Wynola's apples.....	Z. Quincey.....	Ballena.....	\$1 00
Large French prunes.....	Z. Quincey.....	Ballena.....	\$1 00
Best display of prunes.....	Z. Quincey.....	Ballena.....	\$2 00
Columbia plums.....	Z. Quincey.....	Ballena.....	\$1 00
Golden Drop plums.....	Z. Quincey.....	Ballena.....	\$1 00
Yellow Gage plums.....	Z. Quincey.....	Ballena.....	\$1 00
Display of plums.....	Z. Quincey.....	Ballena.....	\$5 00
Beurre pears.....	Z. Quincey.....	Ballena.....	\$1 00
Beurre apples.....	M. D. Putman.....	Wynola.....	\$1 00
White Pippin apples.....	M. D. Putman.....	Wynola.....	\$1 00
Wintown Pippin apples.....	Chester Gunn.....	Julian.....	\$1 00
Beurre pears.....	Chester Gunn.....	Julian.....	\$1 00
Beurre d'Anjou pears.....	Chester Gunn.....	Julian.....	\$1 00
Beurre Clairgeau pears.....	Chester Gunn.....	Julian.....	\$1 00
Display of pears.....	Chester Gunn.....	Julian.....	\$10 00
Beurre Beurre pears.....	J. W. Mulkins.....	Ballena.....	\$1 00
Sambo apples.....	J. W. Mulkins.....	Ballena.....	\$1 00
Best display of apples.....	W. A. Sickler.....	Wynola.....	\$10 00
Yellow peaches.....	Miss Nellie McQueen.....	Palomar.....	\$1 00
House pears.....	George Dyche.....	Palomar.....	\$1 00
Yellow pears.....	George Dyche.....	Palomar.....	\$1 00
Best display of pears.....	Angel Bros.....	Mesa Grande.....	\$5 00
Display of northern fruits.....	Chester Gunn.....	Julian.....	G. medal.
Display of fruits in glass.....	Mrs. S. P. Abell.....	Escondido.....	\$22 50
.....	Mrs. S. P. Abell.....	Escondido.....	harness.
.....	Mrs. S. P. Abell.....	Escondido.....	\$1 00
.....	Mrs. S. P. Abell.....	Escondido.....	\$1 00
.....	Mrs. S. P. Abell.....	Escondido.....	\$1 00
.....	Mrs. S. P. Abell.....	Escondido.....	\$1 00
.....	F. M. Statler.....	Escondido.....	\$1 00
Yellow peaches.....	F. M. Statler.....	Escondido.....	\$2 00
Best display of peaches.....	F. M. Statler.....	Escondido.....	\$10 00
Display of dried fruits.....	Maurice Riedy.....	Escondido.....	\$2 00
Dried apricots.....	Maurice Riedy.....	Escondido.....	\$2 00
White Winter Pearmain apples.....	Maurice Riedy.....	Escondido.....	\$1 00
Best display of northern fruits.....	Maurice Riedy.....	Escondido.....	\$10 00
Yellow Japan plums.....	Maurice Riedy.....	Escondido.....	\$1 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Best display of peaches	Maurice Riedy	Escondido
Best display of figs	Maurice Riedy	Escondido
Plate seedling peaches	H. W. Ward	Escondido
Plate Swaar apples	James Brunsdon	Escondido
Plate Silver prunes	Gedney & Shinn	Mesa Grande
Plate Yellow Egg plums	Gedney & Shinn	Mesa Grande
Plate Apple quinces	Gedney & Shinn	Mesa Grande
Plate Seckel pears	Gedney & Shinn	Mesa Grande
Second best display of plums	Chester Gunn	Julian
Best display of prunes	Chester Gunn	Julian
Plate Ben Davis apples	Chester Gunn	Julian
Plate Stark apples	Chester Gunn	Julian
Plate Spitzenberg apples	Chester Gunn	Julian
Plate Lady apples	O. S. Chapin	Poway
Plate crabapples	O. S. Chapin	Poway
Plate Langford Seedling apples	O. S. Chapin	Poway
Plate Fameuse apples	O. S. Chapin	Poway
Plate Roxbury Russet apples	O. S. Chapin	Poway
Plate Howell pears	O. S. Chapin	Poway
Plate Keifer's Hybrid pears	O. S. Chapin	Poway
Plate P. Barry pears	O. S. Chapin	Poway
Plate Duchess du Augsbury pears	O. S. Chapin	Poway
Plate Shannon Pippin apples	W. A. Sickler	Wynola
Plate Salway peaches	Mrs. C. C. Watson	Poway
Plate Winter Nelis pears	C. O. McDougall	Escondido
Plate Le Comte pears	G. W. Parnell	Poway
Plate October peaches	B. B. Rockwood	San Pasqual
Plate Maltese Blood oranges	Charles Calloway	Escondido
Plate Mediterranean Sweet oranges	Charles Calloway	Escondido
Best display of pomegranates	B. C. Williamson	Elsinore
Second best display of quinces	B. C. Williamson	Elsinore
Plate Orange quinces	G. F. Merriam	Twin Oaks
Plate Foster peaches	D. M. Breedlove	Valley Center
Plate Paradise Seedling peaches	D. M. Breedlove	Valley Center
Plate Late Crawford peaches	D. M. Breedlove	Valley Center
Plate Orange Cling peaches	D. M. Breedlove	Valley Center
Plate Kennedy peaches	D. M. Breedlove	Valley Center
Plate Winter Red apples	D. M. Breedlove	Valley Center
Plate McAfee apples	W. H. H. Dinwiddie	Valley Center
Display of strawberry guavas	W. D. Wooldridge	Escondido
Plate Heath Cling peaches	James Riedy	Escondido
Plate Beurre Batteau peaa	J. G. Frazier	Valley Center
Plate Beurre Bosc pears	J. G. Frazier	Valley Center
Best display of quinces	C. G. Gilbert	Poway
Plate Jonathan apples	S. Bowron	Poway
Plate Vicar of Wakefield pears	D. H. Smith	Pala
Plate Bellflower apples	D. H. Smith	Pala
Plate oranges	D. H. Smith	Pala
Plate lemons	D. H. Smith	Pala
Plate Lisbon lemons	D. H. Smith	Pala
Plate Navel oranges	D. H. Smith	Pala
Best display of persimmons	D. H. Smith	Pala
Plate Japanese persimmons	D. H. Smith	Pala
Plate black figs	D. H. Smith	Pala
Display of wine	Julius Delphy	Buena
Second best display of fruit in glass	Mrs. E. L. Dorn	Escondido
Jar red raspberries	Mrs. E. L. Dorn	Escondido
Jar Muscat grapes	Mrs. W. W. Horine	Escondido
Jar black raspberries	Mrs. J. D. Kerr	Escondido
Jar quinces	C. G. Gilbert	Poway
Jar apricots	D. H. Smith	Pala
Third best display of fruit in glass	Maurice Riedy	Escondido
Jar cherries	Gedney & Shinn	Mesa Grande
Jar strawberries	W. L. Detrich	Julian
Jar blackberries	Miss Ella Bailey	Wynola
Best display of jellies	Miss Anna Abell	Escondido
Second best	Mrs. O. S. Chapin	Poway
Five pounds dried pears	Mrs. L. J. Dearborn	Poway
Five pounds dried apples	Mrs. L. J. Dearborn	Poway
Five pounds walnuts	D. H. Smith	Pala

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
raisins	Mrs. C. C. Watson	Poway	\$5 00
raisins	Mrs. C. C. Watson	Poway	\$5 00
peanuts	H. W. Ward	Escondido	\$5 00
dried peaches	D. H. Smith	Pala	\$2 00
dried prunes	O. S. Chapin	Poway	\$2 00
almonds	O. S. Chapin	Poway	\$5 00
dried figs	O. S. Chapin	Poway	\$5 00
dried nectarines	C. G. Gilbert	Poway	\$2 00
display of grapes	Escondido L. & T. Co.	Escondido	\$10 00

THIRD DEPARTMENT.

FARM PRODUCE.

Exhibit.	Exhibitor.	Address.	Award.
white corn	J. W. Donovan	Bernardo	\$2 00
neck squashes	J. W. Donovan	Bernardo	\$1 00
beets	J. W. Cox	Twin Oaks	\$1 00
melons	J. W. Cox	Twin Oaks	\$1 00
popcorn	R. S. Cox	Twin Oaks	\$1 00
lima beans	Isaac Martin	Merle	\$1 00
pink beans	Isaac Martin	Merle	\$1 00
field peas	Isaac Martin	Merle	\$1 00
melons	Isaac Martin	Merle	\$1 00
potatoes	Isaac Martin	Merle	\$1 00
white corn, shelled	Isaac Martin	Merle	\$1 00
yellow corn, shelled	Isaac Martin	Merle	\$2 00
sweet potatoes	A. L. Butterfield	Escondido	\$1 00
potatoes	A. L. Butterfield	Escondido	\$1 00
watermelon	Samuel Striplin	Valley Center	\$1 00
Peerless potatoes	T. O. Bailey	Nellie	\$1 00
Humboldt potatoes	T. O. Bailey	Nellie	\$1 00
early sweet corn	T. O. Bailey	Nellie	\$2 00
hops	Arthur Juch	Wynola	\$2 00
hops	Arthur Juch	Wynola	\$1 00
cabbage	Arthur Juch	Wynola	\$1 00
cabbage	Arthur Juch	Wynola	\$1 00
Burbank Seedling potatoes	J. E. Hamilton	Julian	\$1 00
display of grain	W. H. H. Dinwiddie	Valley Center	\$10 00
corn on stalk	W. B. Cloyd	Escondido	\$2 00
grain in sheaf	J. G. Frazier	Valley Center	\$2 00
Proper wheat	W. F. James	Valley Center	\$1 50
Proper wheat	W. F. James	Valley Center	\$2 50
corn on stalk	W. C. Latta	San Pasqual	\$1 00
Australian wheat	M. F. Quinn	Warner's	\$1 00
Proper wheat	M. F. Quinn	Warner's	\$2 00
Proper wheat	W. C. Smith	Escondido	\$1 00
Australian wheat	Moses Perin	Murietta	\$2 50
Proper wheat	Moses Perin	Murietta	\$1 00
Australian wheat	Moses Perin	Murietta	\$2 00
Proper wheat	Moses Perin	Murietta	\$3 00
Proper wheat	Mrs. J. A. Pomeroy	Escondido	\$2 00
white corn	R. W. Cole	Valley Center	\$2 00
white corn	R. W. Cole	Valley Center	\$1 00
Proper wheat	S. D. Lampher	San Luis Rey	\$1 00
Proper wheat	D. T. Oaks	Bernardo	\$1 00
Proper wheat	B. C. Williamson	Elsinore	\$1 00
yellow corn	Isaac Martin	Merle	\$1 00
yellow corn	G. W. Parnell	Poway	\$2 00
yellow corn	W. H. H. Dinwiddie	Valley Center	\$1 00

*And sack of flour.

SPEED PROGRAMME.

TUESDAY, SEPTEMBER 30, 1890.

RACE No. 1—TROTTING.

2:40 Class. Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Carrie S.....	A. Sprowl.....	San Diego
William A.....	Francisco Pico.....	San Jacinto
Scott, by Malcolm.....	C. J. Coutts.....	Buena Vista
Tapps, by Duke of Brunswick.....	James E. Brophy.....	San Diego

SUMMARY.

William A.....	1 1 1
Scott.....	2 2 2
Tapps.....	3 3 3
Carrie S.....	4 dis.

Time—2:34½; 2:37½; 2:41½.

RACE No. 2—RUNNING.

For two-year olds. Purse, seventy-five dollars. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
McGinty, by Mohawk.....	W. V. Dyche.....	San Diego
Peri.....	D. Bridges.....	Los Angeles
Allie H, by Wildidle.....	J. Maron.....	San Jacinto
Centinella, by Hock Hocking.....	Francisco Estudillo.....	San Jacinto
Clarice, by Jim Polk.....	S. B. Stroud.....	San Jacinto

SUMMARY.

Peri.....	1
Centinella.....	2
Clarice.....	3

Time—0:52½.

RACE No. 3—RUNNING.

Open to all. Purse, one hundred and fifty dollars. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Naicho B, by Wanderer.....	P. C. Dornalech.....	San Jacinto
Peri.....	D. Bridges.....	Los Angeles
Ben H.....	J. O. Crawhall.....	San Jacinto

SUMMARY.

Naicho B.....	1
Peri.....	2
Ben H.....	3

Time—2:10½.

WEDNESDAY, OCTOBER 1, 1890.

RACE No. 4—TROTTING.

San Diego County stallions. Purse, two hundred dollars. Mile heats, best three

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Chief of Eco.....	Graham & Hewes.....	San Diego.
by Morgan, by Sacramento.....	C. J. Coutts.....	Buena Vista.
by McGregor, by Robert McGregor.....	Burke, Craigne & Co.....	San Diego.
by Gray McClellan.....	Henry Keith.....	San Diego.
	Robt. Daley.....	Escondido.

SUMMARY.

Chief.....	1 1 1
by W.....	2 2 2
by Morgan.....	3 dis.

Time—2:36½; 2:38; 2:40.

RACE No. 5—RUNNING.

All. Purse, one hundred dollars. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by.....	J. O. Crawhall.....	San Diego.
by Bohox.....	Jas. Johnson.....	San Diego.
by Kipspringer.....	S. B. Stroud.....	Santa Ana.
by Reveille.....	Chauncey Hayes.....	Oceanside.
	A. H. Brinton.....	Escondido.
	D. Bridges.....	Los Angeles.

SUMMARY.

by.....	1 1
by.....	3 2
by Hern.....	2 3
by.....	dis.

Time—0:50½; 0:52.

RACE No. 6—TROTTING.

Mile, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Alcyone.....	C. A. Durfee.....	Los Angeles.
by Inca.....	Earp & Brown.....	San Diego.

SUMMARY.

McKinney 1 1 1
 Jim Leach 2 2 2
Time—2:34½; 2:31; 2:31.

THURSDAY, OCTOBER 2, 1890.

RACE No. 7—PACING.

Open to all. Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Jessie	A. Sprowl	Santa Ana
Nellie C	J. F. Coutts	San Luis Rey
Southern Chief, by Messenger	James Hewson	Escondido

SUMMARY.

Nellie C 2 1 1 1
 Southern Chief 1 2 2 2
 Jessie 3 3 dia
Time—2:38¾; 2:37; 2:43½; 2:45.

RACE No. 8—RUNNING.

San Diego Derby. Free for all. One and one half miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Naicho B, by Wanderer	P. C. Dornalech	Santa Ana
Comet	Thomas Alvarado	Palm Springs
Lillie, by Klipspringer	Chauncey Hayes	Oceanside
Prim, by Klipspringer	Francisco Estudillo	San Jacinto

SUMMARY.

Naicho B. 1
 Lillie 2
 Comet 3
Time—2:49½.

RACE No. 9—TROTting.

Open to all three-year olds. Purse, one hundred and fifty dollars. Mile heats, best two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Prato, by Prestige	J. W. Blee	Santa Ana
Cad R, by McClellan	T. A. Burns	San Diego
McKinney, by Alcyone	C. A. Durfee	Los Angeles

SUMMARY.

McKinney 1 1
 Prato 2 2
 Cad R 3 3
Time—2:46; 2:48.

FRIDAY, OCTOBER 3, 1890.

RACE No. 10—TROTting.

Open to all. Purse, two hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Leach, by Inca	Earp & Brown	San Diego.
.....	C. A. Durfee	Los Angeles.
Grey, by Alcyone	C. A. Durfee	Los Angeles.

SUMMARY.

Jim Leach 2 1 2 1 1
 Leonor 1 2 1 2 2
Time—2:28¾; 2:31; 2:32; 2:30; 2:39.

RACE No. 11—TROTting.

Open to all. Purse, one hundred and fifty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
John Bright	C. H. Frew	San Diego.
.....	Burke, Craigne & Co.	San Diego.
.....	A. Sprowl	Santa Ana.

SUMMARY.

Artist 1 1 1
 Carrie S 2 2 2
Time—2:42; 2:40; 2:40.

RACE No. 12—RUNNING.

Open to all. Purse, seventy-five dollars. Three quarters of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
.....	A. H. Brinton	Escondido.
.....	David Bridges	Los Angeles.
.....	James Johnson	San Diego.
.....	Francisco Estudillo	San Jacinto.
.....	P. C. Dornalech	Santa Ana.

SUMMARY.

Peri 1
 Naicho B 2
 Continella 3
 Major 4
Time—1:17¾.

RACE No. 13—TROTTING.

For two-year old colts of San Diego County. Premium, gold medal.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Rex, Jr., by Atto Rex	Burke, Craigne & Co.	San Diego
Jennie F, by Woodlake	C. H. Frew	San Diego

SUMMARY.

Rex, Jr. 1
 Jennie F 2

RACE No. 14—MIXED TROTTING AND PACING.

Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Southern Chief, by Messenger	James Hewson	Escondido
Tapps, by Duke of Brunswick	James E. Brophy	San Diego
Scott, by Malcolm	C. J. Coats	Buena Vista

SUMMARY.

Southern Chief 1 1 1
 Tapps 2 2 2
 Scott 3 3 3

Time—2:36; 2:37½; 2:39.

TRANSACTIONS

OF THE

TWENTY-FIFTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Napa and Solano.

REPORT.

OFFICERS OF THE ASSOCIATION.

NAPA, January 1, 1891.

L. L. JAMES	President
NATHAN COOMBS	Vice-President
J. EVEN	Treasurer
A. H. CONKLING	Secretary

honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Twenty-fifth District Agricultural Association submit this, their report of the transactions of said association for the year 1890.

A. H. CONKLING,
Secretary.

DIRECTORS.

L. L. JAMES	Napa
NATHAN COOMBS	Napa
JOHN EVEN	Napa
F. W. LOEBER	St. Helena
L. C. HARRIER	Vallejo
A. T. HATCH	Calistoga
J. HOYT	Benbow
E. E. LEAKE	Napa

RECEIPTS AND EXPENDITURES.

Receipts.

Entrance	\$6,120 00
Privileges	3,109 58
Season tickets	1,150 00
Grand stand	587 75
Tickets at fair grounds	1,680 25
Tickets at Pavilion	421 00
Quarter-stretch badges	30 00
Wagon and 'bus licenses	310 00
Subscriptions	885 00
State appropriation	3,000 00
	<u>\$17,293 58</u>

Expenditures.

Salaries	\$9,915 00
Expenses	3,475 05
Penalties	2,998 00
Depreciation	905 53
	<u>\$17,293 58</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

HORSES, MULES, ETC.

Exhibit.	Exhibitor.	Address.
CLASS I—THOROUGHBREDS.		
Mena, mare, four years old	B. C. Holly	Vallejo
Sidney, suckling colt	B. C. Holly	Vallejo
Belle O'Neil, mare, one year old	William Imrie	Napa
CLASS II—STANDARD TROTTERS—STALLIONS.		
Alcona, four years old and over	F. W. Loeber	St. Helena
Geo. Washington, four years old and over	T. Smith	Vallejo
Coligna, four years old and over	C. Reams	Suisun
Kaffir, three years old	B. C. Holly	Vallejo
San Diego, three years old	H. W. Crabb	Oakville
El Capitan, two years old	Rush & Hastings	Napa
The Dane, two years old	Coombs Bros.	Suisun
Ethelbert, two years old	Rush & Hastings	Suisun
Stonewall, one year old	R. G. Head	Napa
Lord Clive, one year old	Coombs Bros.	Napa
Columbus, one year old	T. Smith	Vallejo
Mount Holly, under one year	B. C. Holly	Vallejo
—, dam, Madonna, under one year	Mrs. Skinner	Napa
—, dam, Lillie Stanley, under one year	Coombs Bros.	Napa
MARES.		
Louissette, four years old and over	B. C. Holly	Vallejo
Madonna, four years old and over	Mrs. Skinner	Napa
Directa, four years old and over	F. W. Loeber	St. Helena
Emm, three years old	J. Jepsen	Napa
Kitty Clay, three years old	R. G. Head	Napa
Neva, two years old	B. C. Holly	Vallejo
Woodine, two years old	H. W. Crabb	Oakville
Lady Thorne, one year old	E. McLees	Vallejo
Easter Egg, one year old	C. Scott	Napa
—, one year old	F. W. Loeber	St. Helena
May Morning, under one year	E. McLees	Vallejo
—, under one year	G. W. Watson	Napa
Noontime, under one year	R. G. Head	Napa
FAMILIES.		
Alcona, stallion, with family of five colts	F. W. Loeber	St. Helena
Coligna, stallion, with family of five colts	C. Reams	Suisun
Louissette, mare, and suckling colt	B. C. Holly	Vallejo
Madonna, mare, and suckling colt	Mrs. Skinner	Napa
Nellie Steinway, mare, and suckling colt	R. G. Head	Napa
Madonna, mare, with family of three colts	Mrs. Skinner	Napa
Nellie, mare, with family of three colts	F. W. Gabriel	Suisun
Tontano, stallion, under one year	J. M. Oliver	Suisun
CLASS III—ROADSTERS—STALLIONS.		
Sitka, four years old and over	D. McVicker	Yountville
Colena, four years old and over	D. Clayton	Suisun
Blackboy, four years old and over	T. B. Edington	Oakville

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
three years old	T. B. Edington	Oakville	\$12 00
three years old	J. Mansfield	Napa	\$6 00
two years old	E. McLees	Vallejo	\$10 00
Clay, two years old	Mrs. Skinner	Napa	\$6 00
two years old	T. B. Edington	Oakville	\$3 00
Dana, aged (special)	F. H. Smythe	Calistoga	Dip. & \$10
MARES.			
four years old and over	I. Metcalf	Napa	\$12 00
four years old and over	T. Vann	St. Helena	\$6 00
four years old and over	Capt. Drake	Vallejo	\$3 00
three years old	Mrs. McFarland	Napa	\$10 00
three years old	I. Metcalf	Napa	\$6 00
three years old	J. W. Reams	Suisun	\$3 00
two years old	N. T. Outwater	Napa	\$5 00
two years old	S. P. Durbin	Napa	\$6 00
two years old	T. B. Edington	Oakville	\$2 00
FAMILIES.			
stallion, and five colts	T. B. Edington	Oakville	\$20 00
mare, and suckling colt	E. McLees	Vallejo	\$12 00
woodward, mare, and suckling colt	S. P. Durbin	Napa	\$6 00
urgent, mare, and suckling colt	John McCord	Napa	\$3 00
CARRIAGE, SADDLE, AND GENTLEMEN'S ROADSTERS.			
team to pole	D. R. Hunt	Napa	\$15 00
team to pole	S. R. Rhodes	Napa	\$8 00
team to pole	S. Buford	Napa	\$15 00
riding to harness	D. McVicker	Yountville	\$10 00
blanche, mare to harness	H. B. Starr	Napa	\$5 00
W. gelding to harness	E. C. Spear	St. Helena	\$3 00
mare to saddle	C. Edgar	Vallejo	\$7 00
mare to saddle	W. Skinner	Napa	\$5 00
skin Maid, mare to saddle	J. C. Daly	Napa	\$3 00
and Beauty, team ponies to pole	Harry Melone	Napa	\$10 00
pony to saddle	Roy Reed	Napa	\$5 00
single pony to harness	F. Metcalf	Napa	\$5 00
DRAFT HORSES—STALLIONS.			
four years old and over	C. Scott	Napa	\$20 00
Orleans, four y's old and over	J. J. McDermott	Napa	\$10 00
four years old and over	L. P. Asbury	Napa	\$5 00
two years old	R. Farron	Napa	\$10 00
one year old	Mrs. Skinner	Napa	\$8 00
one year old	J. M. Mansfield	Napa	\$4 00
under one year	J. W. Grigsby	Napa	\$5 00
under one year	W. Imrie	Napa	\$3 00
under one year	K. Sackett	Napa	\$2 00
MARES.			
four years old and over	J. W. Grigsby	Napa	\$12 00
four years old and over	Mrs. Skinner	Napa	\$6 00
three years old	C. Scott	Napa	\$10 00
Ross, two years old	F. Varty	Napa	\$10 00
two years old	K. Sackett	Napa	\$5 00
one year old	G. W. Watson	Napa	\$5 00
one year old	J. M. Mansfield	Napa	\$2 50
under one year	C. Scott	Napa	\$5 00
FAMILIES.			
stallion, with family of five	C. Scott	Napa	\$20 00
mare, and suckling colt	C. Scott	Napa	\$12 00
mare, and suckling colt	C. Scott	Napa	\$6 00
mare, and suckling colt	W. Imrie	Napa	Sp. men.
mare, with family of three colts	G. W. Watson	Napa	\$20 00

FIRST DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS VI—GENERAL PURPOSES—STALLIONS.			
Emperor, three years old and over	D. R. Hunt	Napa	\$12 00
Harkaway, three years old and over	J. Kidd	Napa	\$6 00
Black Morgan, three years old and over	J. W. Reams	Suisun	\$10 00
Tom Exchange, two years old	C. Oesch	Napa	\$6 00
Abbott, one year old	I. Metcalf	Napa	\$4 00
—, under one year	J. W. Grigsby	Napa	\$5 00
MARES.			
—, three years old and over	Capt. Drake	Vallejo	\$10 00
—, three years old and over	J. W. Grigsby	Napa	\$6 00
Red Dolly, three years old and over	R. G. Head	Napa	\$4 00
Tonice, two years old	J. M. Mansfield	Napa	\$3 00
Topsy, two years old	R. G. Head	Napa	\$3 00
—, two years old	G. W. Watson	Napa	\$3 00
Nancy, one year old	R. G. Head	Napa	\$4 00
FAMILIES.			
Maggie and suckling colt	J. M. Mansfield	Napa	\$12 00
—, with family of colts	J. M. Mansfield	Napa	\$10 00
Dolly, with family of colts	R. G. Head	Napa	\$10 00

SECOND DEPARTMENT.

CATTLE.

Exhibit.	Exhibitor.	Address.	Award.
CLASS VIII—SHORTHORNS—BULLS.			
Alexander, three years old and over	W. Imrie	Napa	\$10 00
—, under one year	W. Imrie	Napa	\$4 00
COWS.			
Mary Gray, three years old and over	C. Scott	Napa	\$12 00
Beauty, three years old and over	W. Imrie	Napa	\$8 00
—, two years old	J. M. Mansfield	Napa	\$10 00
—, one year old	J. M. Mansfield	Napa	\$4 00
CLASS X—HEREFORDS—COWS.			
Lucy, two years old	W. Imrie	Napa	\$12 00
CLASS XII—POLLED ANGUS—BULLS.			
Farmer, three years old and over	Frisbie Bros. & Bailey	Napa Junction	\$15 00
Napa, two years old	Frisbie Bros. & Bailey	Napa Junction	\$10 00
Solano, one year old	Frisbie Bros. & Bailey	Napa Junction	\$10 00
Suscol, under one year	Frisbie Bros. & Bailey	Napa Junction	\$10 00
Vallejo, under one year	Frisbie Bros. & Bailey	Napa Junction	\$10 00
COWS.			
Waveland Belle, three years old and over	Frisbie Bros. & Bailey	Napa Junction	\$12 00
CLASS XVIII—HOLSTEINS—BULLS.			
Jerry, three years old and over	J. W. Grigsby	Napa	\$10 00
—, two years old	Mrs. L. A. Starr	Vallejo	\$10 00
—, one year old	Mrs. L. A. Starr	Vallejo	\$10 00
COWS.			
—, three years old and over	Mrs. L. A. Starr	Vallejo	\$12 00
—, under one year	Mrs. L. A. Starr	Vallejo	\$10 00
CLASS XX—JERSEYS AND GUERNSEYS—BULLS.			
—, three years old and over	Mrs. L. A. Starr	Vallejo	\$10 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
COWS.			
—, three years old and over	W. Imrie	Napa	\$12 00
—, three years old and over	Mrs. L. A. Starr	Vallejo	\$6 00
—, two years old	Mrs. Gibbs	Yountville	\$10 00
—, one year old	W. Imrie	Napa	\$6 00
—, under one year	Mrs. L. A. Starr	Vallejo	\$4 00
—, under one year	Mrs. Gibbs	Yountville	\$5 00
CLASS XIV—GRADED CATTLE—COWS.			
—, one year old	J. W. Grigsby	Napa	\$10 00
—, one year old	Frisbie Bros. & Bailey	Napa Junction	\$6 00

THIRD DEPARTMENT.

SHEEP, SWINE, AND POULTRY.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—SOUTH SHROPSHIRE, ETC.			
—, one year old	Mrs. L. A. Starr	Vallejo	\$8 00
—, under one year	Mrs. L. A. Starr	Vallejo	\$8 00
—, under one year	P. Sheppa	Batavia	\$9 00
CLASS III—SWINE—BERKSHIRES.			
—, one year old	P. Sheppa	Batavia	\$10 00
—, five pigs	F. Rochford	Napa	\$10 00
CLASS XXI—POLAND-CHINA.			
—, one year old and over	G. W. Watson	Napa	\$10 00
—, one year old and over	Mrs. L. A. Starr	Vallejo	\$5 00
—, six months old	M. Alexander	Napa	\$6 00
—, one year old and over	P. Sheppa	Batavia	\$10 00
—, one year old and over	P. Sheppa	Batavia	\$5 00
—, six months old	P. Sheppa	Batavia	\$5 00
—, five pigs	M. Alexander	Napa	\$6 00
—, five pigs	Mrs. L. A. Starr	Vallejo	\$10 00
CLASS XXIII—LIGHT BRAHMAS.			
—, Light Brahma fowls	R. G. Head	Napa	\$2 50
—, Light Brahma chicks	R. G. Head	Napa	\$2 50
—, one pen of Light Brahmas	R. G. Head	Napa	\$5 00
CLASS XXIV—DARK BRAHMAS.			
—, Dark Brahma fowls	R. G. Head	Napa	\$2 50
CLASS XXVI—BUFF COCHINS.			
—, Buff Cochin fowls	R. G. Head	Napa	\$2 50
CLASS XXVII—PLYMOUTH ROCKS.			
—, Plymouth Rock fowls	J. Stevens	Napa	\$2 50
—, Plymouth Rock chicks	J. W. Grigsby	Napa	\$2 50
—, one pen of Plymouth Rocks	I. Metcalf	Napa	\$5 00
CLASS XXVIII—WYANDOTTES.			
—, Wyandotte fowls	R. G. Head	Napa	\$2 50
—, Wyandotte chicks	R. G. Head	Napa	\$2 50
—, one pen of Wyandottes	R. G. Head	Napa	\$5 00
CLASS XXIX—LANGSHANS.			
—, one pen of Langshans	J. W. Grigsby	Napa	\$5 00
CLASS XL—BLACK SPANISH.			
—, Black Spanish fowls	R. G. Head	Napa	\$2 50
—, Black Spanish chicks	R. G. Head	Napa	\$2 50
—, one pen of Black Spanish fowls	R. G. Head	Napa	\$5 00

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
CLASS XLI—WHITE LEGHORNS.		
Pair of White Leghorn fowls	R. G. Head	Napa
Pair White Leghorn chicks	Joe Keller	Napa
Breeding pen of White Leghorns	R. G. Head	Napa
CLASS XLII—BROWN LEGHORNS.		
Pair Brown Leghorn fowls	J. Stevens	Napa
Pair Brown Leghorn chicks	R. G. Head	Napa
Breeding pen of Brown Leghorns	R. G. Head	Napa
CLASS XLIII—BLACK LEGHORNS.		
Pair Black Leghorn fowls	R. G. Head	Napa
Pair Black Leghorn chicks	R. G. Head	Napa
Breeding pen of Black Leghorns	R. G. Head	Napa
CLASS XLVII—BROWN RED GAME.		
Pair Brown Red Game fowls	P. Kelly	Napa
Pair Brown Red Game chicks	P. Kelly	Napa
CLASS L—BANTAMS.		
Pair Bantam fowls	W. Imrie	Napa
Pair Bantam chicks	R. G. Head	Napa
Breeding pen of Bantams	I. Metcalf	Napa
CLASS LII—TURKEYS.		
Pair Bronze turkey fowls	R. G. Head	Napa
Pair Bronze turkey fowls	I. Metcalf	Napa
Pair Bronze turkey chicks	R. G. Head	Napa
Pair Bronze turkey chicks	R. G. Head	Napa
CLASS LV—ROUEN DUCKS.		
Pair Rouen ducks	R. G. Head	Napa
Pair Rouen ducks	R. G. Head	Napa
CLASS LVI—PEKIN DUCKS.		
Pair Pekin ducks	W. Imrie	Napa
Pair Pekin ducks	R. G. Head	Napa
CLASS LVII—TOULOUSE GESE.		
Pair Toulouse geese	P. Sheppa	Batavia
Pair Toulouse geese	I. Metcalf	Napa
CLASS LIX—EMBDEN GESE.		
Pair Embden geese	W. Imrie	Napa
Pair Embden geese	R. G. Head	Napa

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS LXI—GRAIN, FLOUR, ETC.		
Best sack flour	Starr & Co.	Vallejo
Best sack rye	A. V. Evans	Atlas Peak
Best sheaf barley	A. V. Evans	Atlas Peak
Best sheaf black oats	A. V. Evans	Atlas Peak
Best ten ears corn	A. V. Evans	Atlas Peak
Best corn on stalk	A. V. Evans	Atlas Peak
Best two sacks wheat	Wm. Imrie	Napa
Best sheaf wheat	Wm. Imrie	Napa
Best sack wheat	G. W. Watson	Napa
Best sack barley	G. W. Watson	Napa
CLASS LXII—VEGETABLES, ROOTS, ETC.		
Best onions	Mrs. Moore	Napa
Best potatoes, five varieties	Mrs. Thompson	Napa
Best potatoes, single variety	Mrs. Thompson	Napa
Best rutabagas	A. V. Evans	Atlas Peak

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS XLIV—FRUITS, GRAPES, NUTS, ETC.			
Tree, orange, and lemon trees	A. Flamant	Napa	Diploma.
Collection of fruit, one orchard	J. N. Reynolds	Napa	\$15 00
Apples	J. N. Reynolds	Napa	\$4 00
Apples	J. N. Reynolds	Napa	\$5 00
Apples	J. N. Reynolds	Napa	\$2 00
Apples, single variety	A. V. Evans	Atlas Peak	\$4 00
Apples, single variety	A. V. Evans	Atlas Peak	\$4 00
Apples, six varieties	Mrs. Moore	Napa	\$7 00
Apples, six varieties	Mrs. Moore	Napa	\$7 00
Table grapes	P. Sheppa	Batavia	\$12 00
Apples, five varieties	M. Durbin	Bridgeport	\$4 00
Apples, one variety	M. Durbin	Bridgeport	\$4 00
Apples	M. Durbin	Bridgeport	\$5 00
Table grapes, one vineyard	M. Durbin	Bridgeport	\$25 00
Apples	J. Stevens	Napa	\$5 00
Apples	J. Reams	Suisun	\$5 00
Apples, three varieties	J. Reams	Suisun	\$7 00
Apples, six varieties	J. Reams	Suisun	\$5 00
Apples	L. Stockman	Napa	\$4 00
Quinces	T. H. Eply	Napa	\$4 00
Apples	Mrs. Moore	Napa	\$5 00
Apples	C. C. Agee	Napa	\$5 00
CLASS XLV—PRESERVED FRUITS, ETC.			
Jams, three varieties	Mrs. Moore	Napa	\$3 00
Jams	Mrs. Robinson	Napa	\$2 00
Collection from one orchard	H. Borette	Napa	\$25 00
Dried peaches, three varieties	H. Borette	Napa	\$5 00
Dried plums, four varieties	H. Borette	Napa	\$5 00
Dried seeded plums, four	H. Borette	Napa	\$5 00
Dried grapes	H. Borette	Napa	\$5 00
Dried fruit, twenty-four varieties	H. Borette	Napa	\$5 00
Dried fruit, twenty-two varieties	T. H. Eply	Napa	\$10 00
Dried fruit, two varieties	T. H. Eply	Napa	\$4 00
Prunes	T. H. Eply	Napa	\$5 00
Prunes	T. H. Eply	Napa	\$5 00
CLASS XLVI—BUTTER, CHEESE, HAM, LARD, AND HONEY.			
Butter	Mrs. Moore	Napa	\$4 00
Honey	Mrs. Moore	Napa	\$4 00
Butter (divided)	E. C. Biggs	Napa	\$6 50
Butter (divided)	A. McFarland	Napa	\$6 50

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS LXVI—WINES.			
Wine	H. W. Crabb	Oakville	\$10 00
Wine	H. W. Crabb	Oakville	\$5 00
Wine	H. W. Crabb	Oakville	\$10 00
Wine	H. W. Crabb	Oakville	\$5 00
Wine	H. W. Crabb	Oakville	\$10 00
Wine	H. W. Crabb	Oakville	\$4 00
Wine	H. W. Crabb	Oakville	\$5 00
Wine	H. W. Crabb	Oakville	\$20 00
Wine	H. W. Crabb	Oakville	\$10 00
Wine	H. W. Crabb	Oakville	\$5 00
Wine	H. W. Crabb	Oakville	\$6 00
Wine	H. W. Crabb	Oakville	\$6 00
Wine	H. W. Crabb	Oakville	\$6 00
Wine	H. W. Crabb	Oakville	\$6 00

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Best Malaga	H. W. Crabb	Oakville	
Best Port, 1887	H. W. Crabb	Oakville	
Best Port, 1888	H. W. Crabb	Oakville	
Best Port, 1885	H. W. Crabb	Oakville	
Best Sherry, one year old	H. W. Crabb	Oakville	
Best blackberry brandy	H. W. Crabb	Oakville	
Best grape brandy, 1887	H. W. Crabb	Oakville	
Best grape brandy, 1888	H. W. Crabb	Oakville	
Best grape brandy, any age	H. W. Crabb	Oakville	
Best blackberry cordial, 1883	H. W. Crabb	Oakville	
Best blackberry cordial, 1888	H. W. Crabb	Oakville	
Best Hock	C. Krug	St. Helena	
Second best	C. Krug	St. Helena	
Best Muscatel	C. Krug	St. Helena	
Second best Sherry	C. Krug	St. Helena	
Best applejack brandy	C. Krug	St. Helena	
Best Zinfandel	C. Krug	St. Helena	
Second best Sauterne	C. Krug	St. Helena	
Best sweepstake	C. Krug	St. Helena	
Second best Bordeaux	C. Krug	St. Helena	
Best Petit Surah	C. Krug	St. Helena	
Best Sherry, any age	C. Krug	St. Helena	
CLASS LXVIII—COUNTY EXHIBITS.			
Best display, one exhibit	M. L. Durbin	Solano	

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS LXX—CARRIAGES, BUGGIES, AND WAGONS MADE IN DISTRICT.			
Best buggy	G. A. Wright	Napa	
Best cart	G. A. Wright	Napa	
Best trimming (divided)	C. Welte	Napa	
Best trimming (divided)	Jepson & Son	Napa	
CLASS LXXI—SADDLERY AND HARNESS.			
Best saddle	Jepson & Son	Napa	
Best double harness	Jepson & Son	Napa	
Best single harness	C. Welte	Napa	
CLASS LXXII—MISCELLANEOUS EXHIBITS OF DISTRICT.			
Best boots and shoes	A. Ferrera	Napa	
Paper decoration	W. R. C.	Napa	
Child's scrap-book	W. R. C.	Napa	
Snake cucumber	F. F. Marks	Napa	
Guinea pigs	J. Stevens	Napa	
Crayon drawing	A. Dixon	Napa	
Best display of terra cotta	Union Brick Co.	Vallejo	
Spools	M. Lord	Napa	
Bookcase	I. Lightner	Napa	
Assorted canes	I. Lightner	Napa	
Garden fixtures	I. Lightner	Napa	
Rolling desk	J. B. Howell	Napa	
Bed brace	H. J. Baddley	Napa	
Carved frame	Mrs. Mount	Napa	
Model gate	C. C. Mansfield	Napa	
Best wood turning	Corlett & Sons	Napa	
Best mill work	Corlett & Sons	Napa	
Best California wood, polished	Corlett & Sons	Napa	
Best spray pump	D. Crumery	Napa	

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS LXXIII—PAINTING, ORNAMENTAL WORK, ETC.			
Wallpaper, ten varieties	Mrs. W. C. S. Smith	Napa	\$25 00
My's dress	Mrs. W. C. S. Smith	Napa	\$2 50
My's suit	Mrs. W. C. S. Smith	Napa	\$6 00
My's machine sewing	Mrs. W. C. S. Smith	Napa	\$6 00
My's lady eighty years old	Mrs. W. C. S. Smith	Napa	\$1 00
My's patchwork	Cora Peck	Napa	\$2 00
My's dress	E. Christiansen	Napa	\$6 00
My's lace	Mrs. W. G. Duhig	Napa	\$4 00
My's spread	Mrs. J. Mitchell	Napa	\$4 00
My's rug	Mrs. J. Mitchell	Napa	\$1 00
My's	Carrie F. Simons	St. Helena	\$2 00
My's lace	Carrie F. Simons	St. Helena	\$4 00
My's	Mrs. H. H. Knapp	Napa	\$4 00
My's skirt	Mrs. F. L. Coombs	Napa	\$6 00
My's silk work	Mrs. F. L. Coombs	Napa	\$4 00
My's	Mrs. F. L. Coombs	Napa	\$4 00
My's set, six pieces	Mrs. F. L. Coombs	Napa	\$4 00
My's, thirty-one pieces	Mrs. F. L. Coombs	Napa	\$10 00
My's knitting	Mrs. G. Heegler	Napa	\$6 00
My's stockings	Mrs. G. Heegler	Napa	\$2 00
My's toilet set	Bertha Heegler	Napa	\$2 00
My's lace	Bertha Heegler	Napa	\$2 00
My's shawl	Mrs. L. Graner	Napa	\$4 00
My's on canvas	Mrs. L. Graner	Napa	\$5 00
My's	M. E. Bowman	Napa	\$4 00
My's scarf	Mrs. Deakin	Napa	\$4 00
My's	Mrs. Barstow	Napa	\$2 00
My's	Mrs. Barstow	Napa	\$1 00
My's	G. Thompson	Napa	\$4 00
My's screen	G. Thompson	Napa	\$6 00
My's carpet	Miss Inman	Napa	\$4 00
My's stockings	Miss Inman	Napa	\$4 00
My's work	Mrs. Barstow	Napa	\$1 00
My's skirt	G. Lamden	Napa	\$2 00
My's embroidery	Etta Cargrave	Napa	\$4 00
My's work	Etta Cargrave	Napa	\$2 00
My's work	Mrs. Keller	Napa	\$2 00
My's	Mrs. Barstow	Napa	\$1 00
My's	Mrs. Barstow	Napa	\$2 00
My's skirt	Grace Mansfield	Napa	\$3 00
My's work	Mrs. Corn	Vacaville	\$5 00
My's work	Mrs. Trowbridge	Napa	\$4 00
My's work	Mrs. Trowbridge	Napa	\$2 00
My's work	Mrs. Trowbridge	Napa	\$2 00
My's	Mrs. Ritchie	Rutherford	\$3 00
My's work	W. R. C.	Napa	\$4 00
My's	C. Stockmon	Napa	\$2 00
My's skirt	L. Stockmon	Napa	\$2 00
My's shawl	L. Stockmon	Napa	\$1 00
My's work	M. Mansen	Napa	\$1 00
My's apron	M. Magetti	Oakville	\$10 00
My's work	Hattie Bowman	Napa	\$3 00
My's	Mrs. L. Graner	Napa	\$3 00
My's work	Mrs. L. J. Norton	Napa	\$1 00
My's work	Mrs. L. J. Norton	Napa	\$4 00
My's patchwork	Mrs. L. J. Norton	Napa	\$2 00
My's work	Mrs. Easterby	Napa	\$4 00
My's embroidery	M. Thompson	Napa	\$10 00
My's work	M. Thompson	Napa	\$4 00
My's work	Miss I. Rider	Napa	\$1 00
My's work	Miss I. Rider	Napa	\$4 00
My's work	Miss I. Rider	Napa	\$4 00
My's cushion	H. Gift	Napa	\$2 00
My's	G. Thompson	Napa	\$4 00
My's	G. Thompson	Napa	\$1 00

SEVENTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Pincushion	Mrs. Alexander	Napa
Quilting	M. Grafe	Napa
Pillow shams	M. Grafe	Napa
Knit stockings	Mrs. Grafe	Napa
Best transfer work	Mrs. R. E. F. Moore	Napa
Fancy machine work	M. Grafe	Napa
Bureau tidy set	Mrs. Gibbs	Yountville
Apron	Mrs. H. Grigsby	Napa
Best embroidered work	Mrs. Deakin	Napa
Best lambrequin	Mrs. Deakin	Napa
Best embroidered chair	Mrs. Deakin	Napa
Quilt	Mrs. Norton	Napa
Fancy work	F. F. Marx	Napa
CLASS LXXIV—BREAD, CAKES, ETC. (OPEN TO YOUNG LADIES UNDER TWENTY YEARS).		
Best tarts	J. Christiansen	Napa
Best sponge cake	M. Grigsby	Napa
Brown bread	M. Grigsby	Napa
Sponge cake	Bertha Heegler	Napa
Coffee cake	Bertha Heegler	Napa
Jelly cake	Flora Metcalf	Napa
Wheat bread	Bertha Levy	Napa
Best exhibit of cooking	Mabel Lovejoy	Napa
Fruit cake	J. Gift	Napa
Best brown bread	Ada Moore	Napa
Best coffee cake	L. Knapp	Napa
Pound cake	L. Knapp	Napa
Fruit cake	L. Knapp	Napa
Wheat bread	L. Boynton	Napa
Wheat bread	Mrs. Bowlan	Napa
Sponge cake	S. Truelson	Napa
Best corn bread	Marie Keller	Napa
Best fruit cake	Marie Keller	Napa
Wheat bread	L. Bailey	Napa Junction
Brown bread	Sylvia Clifford	Napa
Tarts	F. E. Boggs	Napa
Best pound cake	Lydia Conkling	Napa
Sponge cake	Lydia Conkling	Napa
Best wheat bread	L. Stevens	Napa
Coffee cake	L. Stevens	Napa
Corn bread	L. Stevens	Napa
Pound cake	Olive Peach	Napa
Best pound cake	Ada Moore	Napa
Wheat bread	G. Lamdin	Napa
Coffee cake	L. Boynton	Napa
Fancy work	J. Christiansen	Napa
Corn bread	I. Rider	Napa
CLASS LXXV—CHILDREN'S DEPARTMENT (FOR CHILDREN FOURTEEN YEARS OLD OR UNDER).		
Etching	Alice W. Smith	Napa
Best fancy tidy	Clara Trubody	Napa
Pencil drawing	Harry Boke	Napa
Pencil drawing	Willie Boke	Napa
Dry bouquet	Miss Clark	Napa
Best jellies	Miss Clark	Napa
Best bead work	Roy C. Gunn	Napa
Best penmanship	Roy C. Gunn	Napa
Pillow sham	Bertha Levy	Napa
Best sponge cake	Blanche Lovejoy	Napa
Fruit cake	Blanche Lovejoy	Napa
Dressed doll	Susie Pedlar	Napa
Best oil painting	M. Eaden	Napa
Best pencil drawing	M. Eaden	Napa
Best applique work	Ella Rider	Napa
Best hair work	Ella Rider	Napa
Best transfer work	Ella Rider	Napa

SEVENTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
sewing	C. Rider	Napa	\$6 00
embroidery on silk	C. Rider	Napa	\$5 00
quilting	Flora Mehl	Napa	\$4 00
knitting	F. Willstruck	Napa	\$1 50
doll	M. Erb	Napa	\$2 00
dressed doll	E. Barstow	Napa	\$4 00
room drawing	L. Keller	Napa	\$4 00
quilting	C. Plass	Napa	\$4 00
press	C. Plass	Napa	\$2 00
sewing	L. Keller	Napa	\$2 00
work	D. Nichols	Napa	\$3 00
work	B. Levy	Napa	\$1 00
quilting	P. Bailey	Napa	\$4 00
quilting with pen	L. Spaulding	Napa	\$4 00
cake	A. Stevens	Napa	\$1 00
cake	A. Stevens	Napa	\$1 00
cake	A. Stevens	Napa	\$4 00
quilting toilet set	A. Stevens	Napa	\$6 00
work	A. Stevens	Napa	\$2 00
best bread	L. Stevens	Napa	\$2 00
bread	M. Coyle	Napa	\$4 00
bread	A. Peach	Napa	\$1 00
bread	A. Stevens	Napa	\$2 00
sewing	L. Sweet	Napa	\$2 00
plate cake	Eva Haun	Napa	\$4 00
corn bread	E. Robinson	Napa	\$4 00
CLASS LXXVI—PAINTING, ORNAMENTAL WORK, ETC.			
landscape in oil	M. Lovejoy	Napa	\$20 00
picture in oil	M. Lovejoy	Napa	\$3 00
painting on satin	Cora Peck	Napa	\$6 00
painting on canvas	Cora Peck	Napa	\$2 00
painting on canvas	Cora Peck	Napa	\$1 00
flowers	Mrs. M. E. Hunt	Napa	\$2 00
birds painting	O. K. Smith	Napa	\$6 00
flower painting	Julia Haun	Napa	\$10 00
flower painting	L. E. Rea	Napa	\$3 00
view painting	L. E. Rea	Napa	\$4 00
sketches	L. E. Rea	Napa	\$4 00
sewing	Sylvia Clifford	Napa	\$2 00
birds	William West	Napa	\$5 00
sewing	William West	Napa	\$4 00
painting	Carrie F. Simons	St. Helena	\$10 00
sewing	Mrs. H. H. Knapp	Napa	\$1 00
sewing	L. F. Dozier	Napa	\$4 00
sewing	Mrs. F. L. Coombs	Napa	\$4 00
sewing	M. E. Bowman	Napa	\$6 00
sewing	Mrs. C. T. Clark	Napa	\$4 00
sewing	Hattie Bowman	Napa	\$4 00
sewing	Hattie Bowman	Napa	\$5 00
sewing	Hattie Bowman	Napa	\$2 50
sewing	Lillie Easterby	Napa	\$2 00
sewing	Lillie Easterby	Napa	\$5 00
sewing	Lillie Easterby	Napa	\$2 00
sewing	Mrs. J. H. Mount	Napa	\$10 00
sewing	H. Bowman	Napa	\$6 00
sewing	H. Bowman	Napa	\$7 00
sewing	Mrs. Blood	Napa	\$4 00
sewing	F. Easterby	Napa	\$2 00
sewing	Mrs. Blood	Napa	\$5 00
sewing	Corlett & Sons	Napa	\$4 00
sewing	H. J. Baddley	Napa	\$2 00
sewing	Mrs. Blood	Napa	\$2 00
sewing	H. Haraszthy	Napa	\$5 00
sewing	Mrs. Dozier	Napa	\$4 00
sewing	L. Ever	Napa	\$1 00
sewing	L. Ever	Napa	\$4 00

SPEED PROGRAMME.

TUESDAY, AUGUST 19, 1890.

RACE No. 1—TROTTING.

2:20 Class. Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Emma Temple, by Jackson Temple; dam, by Emigrant	Agnew Stock Farm	San Mateo
Express, by Electioneer; dam, Esther	Palo Alto Stock Farm	Mendo
Maggie E, by Nutwood; dam, by George M. Patchen, Jr.	Emerson & Berry	San Jo
Hazel Wilkes, by Guy Wilkes; dam, Blanche	San Mateo Stock Farm	San Mateo
Victor, by Echo; dam, by Woodburn	G. A. Doherty	Crescent

SUMMARY.

Hazel Wilkes	1	1	1
Emma Temple	2	2	2
Victor	3	3	4
Express	5	4	3
Maggie E	4	5	5

Time—2:22½; 2:20¾; 2:21¾.

RACE No. 2—TROTTING.

2:30 Class. Guaranteed stake, one thousand five hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Silas Skinner, by Alcona, Jr.; dam, Fontana	De Turk & McGraw	San Francisco
Balkan, by Mambrino Wilkes; dam, Fanny Fern	Irvin Ayres	San Francisco
Keepsake, by Black Ralph; dam, Bent B.	L. H. Boggs	Vallejo
Flora G, by Altoona; dam, by Conway's Patchen	B. C. Holly	Vallejo
George Washington, by Mambrino Chief, Jr.; dam, Fanny	T. Smith	Vallejo
Clara Z, by Capri; dam, Fannie	A. Gonzales	Vallejo
Bob Mason, by Echo; dam, Belle Mason	E. B. Gifford	San Francisco
Lee, by General Lee; dam, by George M. Patchen, Jr.	G. W. Theuerkauf	San Francisco
Una Wilkes, by Guy Wilkes; dam, Blanche	San Mateo Stock Farm	San Mateo

SUMMARY.

Silas Skinner	1	1	1
Bob Mason	2	4	3
Flora G	6	3	3
Clara Z	4	3	3

Time—2:21; 2:25½; 2:21¾.

RACE No. 3—TROTTING.

Class. For horses owned in the district. Purse, six hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Stanford; dam, Kate Dudley	E. McGerry	
by Admiral	John Smith	
by General Benton; dam, Dolly, by	M. Finlaw	
by Blackbird; dam, Ellen Swigert	D. M. Reavis	Chico.
by Maid, by Anteeo; dam, by Mountain	R. Murphy	Santa Rosa.
by Dawn; dam, Miss Brown	W. R. Overholzer	Petaluma.

SUMMARY.

by H	1	1	1
by Out	2	2	2
by Mountain Maid	3	3	3

Time—2:23½; 2:24; 2:26½.

RACE No. 4—TROTTING.

Yearlings owned in the district. Stake, three hundred and eighty dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Sidney; dam, Lena Bowles	B. E. Harris	San Francisco.
by Anteeo; dam, Debonair	R. S. Brown	Petaluma.
by	A. L. Whitney	Petaluma.
by King, by Rustic; dam, Lozelle	P. J. Shafter	Olema.
by Small, by Director; dam, Nellie Steinway	R. G. Head	Napa.
by Thorne, by Thornhill; dam, Lady Nut	E. McLees	Vallejo.
by, by McDonald Chief; dam, Fanny	T. Smith	Vallejo.
by Guide; dam, Mollie	A. T. Hatch	Suisun.

SUMMARY.

by Mareuil	1		
by Rustic King	2		
by Columbus	3		

Time—2:57.

WEDNESDAY, AUGUST 20, 1890.

RACE No. 5—RUNNING.

Purse, two hundred dollars, added. Three quarters of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Pill Box; dam, Della Walker	M. T. Walters	Sacramento.
by Joe Hooker; dam, Kate Carson	Undine Stable	Stockton.
by Joe Daniels; dam, by Partisan	J. J. Dolan	Modesto.
by Wildidle; dam, by Monday	O. Appleby	Santa Clara.
by Wildidle; dam, by Monday	W. L. Appleby	Santa Clara.
by Norfolk; dam, Mattie Glenn	Owens Bros.	Fresno.

SUMMARY.

Alfarata.....	1 1
Juniata.....	2 2
Serpolette.....	dis.

Time—1:18 $\frac{1}{2}$; 1:19 $\frac{1}{2}$.

RACE No. 6—RUNNING.

Two hundred and fifty dollars, added. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Hotspur, by Joe Daniels; dam, Sister to Jim Douglas.....	Dennison Bros.....	Sacramento
Wild Oats, by Wildidle; dam, Mary Givens.....	W. L. Appleby.....	Santa Clara
Daisy D, by Wheatly; dam, Black Maria.....	Owens Bros.....	From
Largetta, by Jils Johnson; dam, Leveret.....	Matt. Storn.....	Sacramento

SUMMARY.

Daisy D.....	1 1
Wild Oats.....	3 2
Hotspur.....	2 3

Time—1:43 $\frac{1}{2}$; 1:43 $\frac{1}{2}$.

RACE No. 7—RUNNING.

Two hundred dollars added. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Menlo, by imp. Prince; dam, Hattie Hawthorne.....	Jas. Henry.....	Stockton
Tycoon, by Shiloh; dam, Margery.....	Undine Stable.....	San Francisco
Applause, by Three Cheers; dam, Alice.....	W. George.....	From
Captain Al, by Kingston; dam, Black Maria.....	Owens Bros.....	Sacramento
Lurline, by Longfield; dam, Katie Pease.....	Matt. Storn.....	Sacramento

SUMMARY.

Tycoon.....	1
Captain Al.....	2
Menlo.....	3

Time—2:08.

THURSDAY, AUGUST 21, 1890.

RACE No. 8—TROTTING.

Purse, one thousand dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Derby, by Steinway; dam, Katie G.....	B. C. Holly.....	Vallejo.
by General Benton; dam, Daisy Miller.....	Palo Alto Stock Farm.....	Menlo Park.
by Nutwood; dam, Coupon.....	San Mateo Stock Farm.....	San Mateo.
by Christian Patchen; dam, by Whip-Hambletonian.....	J. C. Moran.....	San Francisco.
by Hawthorne; dam, by Whipple's.....	L. U. Shippee.....	Stockton.
by A. W. Richmond; dam, Maud Smith.....	E. B. Gifford.....	San Diego.
by Abbot; dam, Agnes.....	P. Brandow.....	San Francisco.
by Mc, by Nephew; dam, by Alexander.....	Percy Williams.....	Stockton.

SUMMARY.

Free Coinage.....	3 2 1 2 3 1 1
El Pay.....	2 3 2 1 2 2 2
Charles Derby.....	5 1 3 4 1 dis.
Chantilly.....	4 5 4 3 4 r. o.
Elrain.....	1 4 5 5 dis.
Leco.....	dis.

Beary Mc given first money, and stayed in stable.

Time—2:31 $\frac{1}{2}$; 2:25 $\frac{1}{2}$; 2:27 $\frac{1}{2}$; 2:28 $\frac{1}{2}$; 2:30; 2:38 $\frac{1}{2}$; 2:38.

RACE No. 9—PACING.

Purse, six hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Medal, by Nephew; dam, unknown.....	C. David.....	San Francisco.
by Alice; by Dexter Prince; dam, Mollie, General McClellan.....	John Patterson.....	Linden.
by Sidney; dam, Humming Bird.....	John Garrity.....	San Francisco.
by Guy Wilkes; dam, Sable Hayward.....	San Mateo Stock Farm.....	San Mateo.
by Daniel Lambert; dam, by Davy.....	J. C. Moran.....	San Francisco.
by Juniata.....	Owens Bros.....	Fresno.

SUMMARY.

Harpe.....	3 1 1 1
Princess Alice.....	1 2 3 3
Hummer.....	2 3 2 2

Time—2:22; 2:21 $\frac{1}{2}$; 2:19 $\frac{1}{2}$; 2:20.

RACE No. 10—TROTTING.

Purse, four hundred and thirty dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Harrington, by Anteeo; dam, Abbotine.....	R. J. Hudson.....	Lakeport.
by Clovis; dam, Leah.....	P. J. Shafter.....	Olema.
by Anteeo; dam, Maud.....	Wilfred Page.....	Penn's Grove.
by Alcazar; dam, Flower Girl.....	R. Murphy.....	Santa Rosa.
	B. C. Holly.....	Vallejo.

SUMMARY.

Maud Dee	1	1
Leoline	3	3
Kaffir	2	4
Antevano	4	2

Time—2:38½; 2:38½; 2:39.

RACE No. 11—TROTTING.

For district two-year olds. Stake, six hundred and twenty dollars. Mile heats, two in three.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Starlight, by Dawn; dam, Lena Bowles	B. E. Harris	San Francisco.
Donas, by Dawn; dam, Kitty	R. S. Brown	Petaluma.
Myrtle, by Anteeo; dam, Luella	I. De Turk	Santa Clara.
Annabelle	A. L. Whitney	Petaluma.
Walnut, by Woodnut; dam, Pinkie	E. McLees	Vallejo.

SUMMARY.

Annabelle	1	1
Myrtle	2	2
Walnut	4	4

Time—2:38½; 2:38.

FRIDAY, AUGUST 22, 1890.

RACE No. 12—RUNNING.

Two hundred and fifty dollars added. One and one half miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Menlo, by imp. Prince; dam, Hattie Hawthorne	James Henry	Sacramento.
Hotspur, by Joe Daniels; dam, Sister to Jim Douglas	Dennison Bros.	Sacramento.
Tycoon, by Shiloh; dam, Margery	Undine Stable	Santa Clara.
Wild Oats, by Wildidle; dam, Mary Givens	W. L. Appleby	Sacramento.
Marigold, by Milner; dam, Katie Pease	Matt. Storn	Sacramento.

SUMMARY.

Tycoon	1	1
Wild Oats	2	2
Hotspur	4	4

Time—2:35½.

RACE No. 13—RUNNING.

Owners' Handicap. One hundred and fifty dollars added. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Albatross, by Pill Box; dam, Della Walker	M. T. Walters	Sacramento.
Silver Bow, by J. M. Hector; dam, Belle of the Mead	J. N. Van Winkle	Sacramento.
Alfarata, by Wildidle; dam, by Monday	W. L. Appleby	Sacramento.
Mero, by Wildidle; dam, Precious	Owens Bros.	Los Angeles.
Dan Murphy	N. A. Covarrubias	Sacramento.
Kildare, by Kyrle Daly; dam, Mistake	Matt. Storn	Sacramento.

SUMMARY.

Alfarata	1
Dan Murphy	2
Silver Bow	3

Time—1:42.

RACE No. 14—RUNNING.

One hundred and fifty dollars added. One half mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Harrison, by Bayswater; dam, Balsam	L. P. Asbury	Napa.
by Glen Ellen; dam, Queen	H. D. Miller	San Francisco.
Ferguson	Undine Stable	Stockton.
by Joe Daniels; dam, Partisan	J. J. Dolan	Modesto.
by Wildidle; dam, by Monday	O. Appleby	Santa Clara.
by Three Cheers; dam, Alice	W. George	San José.
by Norfolk; dam, Mattie Glenn	Owens Bros.	Fresno.
by Wildidle; dam, Dottie Dimple	N. A. Covarrubias	Los Angeles.
Lamb, by Boots; dam, Dixie Maid	J. B. Henkle	Petaluma.

SUMMARY.

Lola Ferguson	1	1
Ma Glenn	2	2
Funista	3	3
City Lamb	4	4
Arpolette	5	5

Time—0:49; 0:48½.

SATURDAY, AUGUST 23, 1890.

RACE No. 15—TROTTING.

Class. Guaranteed stake, one thousand five hundred dollars. Mile heats, best in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Tom Benton; dam, Brown Jen-son	J. L. McCord	Sacramento.
by Anteeo; dam, Lou Milton	Sanborn & Murphy	Santa Rosa.
by Capri; dam, Fanny	James Hastings	Petaluma.
by Inca; dam, by Echo	B. C. Holly	Vallejo.
by Eros; dam, by Elmo	La Sesta Ranch	Menlo Park.
by Sidney; dam, Nettie Lambert	San Mateo Stock Farm	San Mateo.

SUMMARY.

Master V	1	1	1
Finck	3	2	2
Wanda	2	4	5
Wood	4	3	3
Harry Lou	5	5	4

Time—2:18½; 2:21½; 2:21½.

RACE No. 16—PACING AND TROTTING.

Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sunset, by Anteo	Guy E. Grosse	Santa Rosa
Alcona, Jr., by Alcona; dam, Madonna	J. P. Rodehaver	Petaluma
Mattie P, by Jackson Temple	D. R. Mizner	Petaluma
Cora C, by Whip; dam, by Naubuc	H. B. Starr	San Francisco

SUMMARY.

Cora C (pacer)	1	1	1
Alcona, Jr.	4	2	2
Sunset	2	4	4
Mattie P	3	3	3

Time—2:34½; 2:32; 2:28½.

RACE No. 17—TROTTING.

2:25 Class. Purse, eight hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Keepsake, by Black Ralph; dam, Bent B	L. H. Boggs	Lakeview
Guide, by Director; dam, Imogene	A. T. Hatch	San Francisco
Vic H, by Blackbird; dam, Ellen Swigert	D. M. Reavis	San Francisco
Oaknut, by Dawn; dam, Miss Brown	W. R. Overholzer	Petaluma

SUMMARY.

Vic H	3	1	1	1
Guide	1	2	2	2
Oaknut	2	3	3	3
Keepsake	4	4	4	4

Time—2:24½; 2:23½; 2:23½; 2:26½.

RACE No. 18—SPECIAL TROTTING.

Purse, two hundred dollars. Mile heats, best three in five.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Barbero	Owens Bros.	San Francisco
Ladywell, by Electioneer; dam, Lady Lowell	R. Havey	Menlo Park
Foxy V	P. Brandow	San Francisco
Wally	J. Garrity	San Francisco

SUMMARY.

Ladywell	1	2	3	1
Barbero	2	1	2	3
Foxy V	3	3	1	2
Wally	4	4	4	dis

Time—2:35½; 2:34; 2:31½; 2:28; 2:30½.

TRANSACTIONS

OF THE

TWENTY-SIXTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Amador and Sacramento.

REPORT.

IONE, December 31, 1890.

OFFICERS OF THE ASSOCIATION.

U. S. GREGORY.....	President
CLOVIS T. LAGRAVE.....	Secretary
GEO. WOOLSEY.....	Treasurer

DIRECTORS.

W. P. PEEK.....	Jackson
U. S. GREGORY.....	Los Angeles
B. A. BORDEN.....	Lancha Plana
E. J. GREGORY.....	Sacramento
JOHN McFARLAND.....	Colo.
OLIVER PLUMMER.....	Consumption
E. C. VOORHEIS.....	Sutter Creek
A. J. MAESTRELLI.....	Los Angeles

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Twenty-sixth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

CLOVIS T. LAGRAVE,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

Tickets.....	\$940 50
Privileges.....	890 00
Contributions.....	122 50
Advertising.....	57 50
Entrance entries and forfeits.....	1,595 00
Directors Gregory, Voorheis, and Maestrelli.....	600 00
State appropriation.....	3,000 00
	<u>\$7,205 50</u>

Expenditures.

Purses and exhibit premiums.....	\$4,719 55
Work at Park and Pavilion.....	632 75
Advertising, printing, etc.....	470 06
Hay and straw.....	211 16
Merchandise supplies.....	148 94
.....	332 50
Unmowed money and interest.....	606 50
Blacksmithing.....	32 98
Insurance.....	52 50
Printer work.....	92 50
Interest on mortgage.....	110 00
Secretary's incidentals.....	32 90
	<u>\$7,442 29</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
PURE BLOOD PERCHERONS.			
Two brood mares and colts.....	Voorheis & Barney..	Sutter Creek	\$15 00
GRADED HORSES.			
Lynette	C. F. Bunch	Lone	\$25 00
Amador	T. L. Culbert	Amador City	\$15 00
Jack the Ripper	M. Corbell	Sutter Creek	\$10 00
Sir Walter	Voorheis & Barney	Sutter Creek	\$7 00
Annie S	C. W. Swain	Lone	\$7 00
Dandy	E. Seguin	Lone	\$5 00
Filly	Voorheis & Barney	Sutter Creek	\$5 00
FAMILIES.			
Utile and five colts	Voorheis & Barney	Sutter Creek	\$20 00
Starlight Gold Dust and five colts	R. F. Swift	Lone	\$20 00
Mettle and two colts	F. Midgley	May	\$10 00
Mary Ann and three colts	W. H. Prouty	Lone	\$10 00
HORSES OF ALL WORK.			
Sir Walter	Geo. Easton	Plymouth	\$20 00
DRAFT HORSES.			
Span, Topsy and Perch	F. Midgley	May	\$10 00
Annie Laurie	W. H. Prouty	Lone	\$7 00
Mollie	F. Midgley	May	\$5 00
JACKS.			
Pedro	R. S. Swift	Lone	\$10 00
MULES.			
Span of aged mules	R. S. Swift	Lone	\$15 00
Span of young mules	A. C. Goodding	Lancha Plana	\$15 00
THOROUGHbred CATTLE.			
Holstein bull	Jas. Nichols	Lancha Plana	\$20 00
Jersey cow	C. W. Swain	Lone	\$20 00
Durham cow	E. J. Gregory	Lone	\$20 00
GRADED CATTLE.			
Cow	A. B. McDonald	Lone	\$5 00
CARRIAGE AND SADDLE HORSES.			
Span of carriage horses	B. Isaacs & Bro.	Lone	\$5 00
Single buggy horse	B. Isaacs & Bro.	Lone	\$5 00
Saddle horse	Ed. Fithian	Lone	\$5 00
ROADSTERS.			
Chief	Joe Carpenter	Lone	\$20 00
GOATS.			
Angora goats	J. W. Joses	Lone	\$20 00
POULTRY.			
Langshans	Eugene Woolsey	Lone	\$20 00
Bantams	Eugene Woolsey	Lone	\$20 00

SPECIAL INDIVIDUAL DISPLAYS.

Exhibit.	Exhibitor.	Address.	Award.
Natural products	H. & L. Northup	Lancha Plana	\$25 00
Natural products	Garibaldi Bros.	Amador City	\$10 00
Natural products	N. Foster	Lancha Plana	\$5 00
Natural products	J. A. Goodding	Lancha Plana	\$25 00
Natural products	N. Foster	Lancha Plana	\$10 00
Natural products	H. & L. Northup	Lancha Plana	\$5 00
Natural products	Geo. Woolsey	Lone	\$25 00
Natural products	Geo. Hansen	Jackson	\$10 00
Natural products	Lone ladies	Lone	\$25 00

SECOND AND THIRD DEPARTMENTS.

Exhibit.	Exhibitor.	Address.	Award.
Work	O. T. Wilson	Lone	Dip. & \$3
Machine	Mrs. S. L. Black	Lone	Diploma.
Machine	Jesse Gregory	Lone	\$2 50
Machine	Jesse Gregory	Lone	Sp. men.
Machine	R. S. Love	Lone	Diploma.
Machine	John Gregory	Lone	\$2 50
Machine	J. B. Williams	May	Dip. & \$3
Machine	Fred. Hammer	May	Dip. \$7 50
Machine	N. Foster	Lancha Plana	\$1 00
Machine	N. Foster	Lancha Plana	\$1 00
Machine	J. B. Williams	May	Diploma.
Machine	D. Denney	Lone	Sp. men.
Machine	F. Frates	Lone	Dip. & \$5
Machine	R. S. & Wm. Woolsey	Lone	Dip. & \$5
Machine	R. S. Love	Lone	Sp. men.
Machine	J. B. Williams	May	Sp. men.
Machine	B. Isaacs & Bro.	Lone	Sp. men.
Machine	D. Denney	Lone	Sp. men.
Machine	Dr. A. L. Adams	Lone	Dip. & \$5

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
Hay	B. Isaacs & Bro.	Lone	\$5 00
Hay	H. Heffren	Lone	Sp. men.
Hay	A. B. McDonald	Lone	\$2 50
Hay	N. Foster	Lancha Plana	\$2 50
Hay	J. A. Goodding	Lancha Plana	\$3 00
Hay	Mrs. M. Kidd	Lone	\$3 00
Hay	George Hansen	Jackson	\$2 50
Hay	C. C. Prouty	Lone	\$3 00
Hay	J. W. Violett	Lone	\$3 00
Hay	George Robertson	Lone	\$2 00
Hay	A. B. McDonald	Lone	\$2 00
Hay	A. B. McDonald	Lone	\$3 00
Hay	N. Foster	Lancha Plana	\$2 50
Hay	N. Foster	Lancha Plana	\$1 50
Hay	J. A. Goodding	Lancha Plana	\$2 00
Hay	J. A. Goodding	Lancha Plana	\$1 50
Hay	H. & L. Northup	Lancha Plana	\$2 50
Hay	H. & L. Northup	Lancha Plana	\$2 00
Hay	H. & L. Northup	Lancha Plana	\$1 50
Hay	D. Denney	Lone	\$3 00
Hay	D. Denney	Lone	\$3 00
Hay	D. Denney	Lone	\$3 00

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Cotton	D. Denney	Ione	
Irish potatoes	Garibaldi Bros.	Amador City	
Tomatoes	Garibaldi Bros.	Amador City	
Cabbages	Garibaldi Bros.	Amador City	
Table carrots	Garibaldi Bros.	Amador City	
Squashes	Garibaldi Bros.	Amador City	
Vegetables	Garibaldi Bros.	Amador City	
Garden seeds	Garibaldi Bros.	Amador City	
Cucumbers	Garibaldi Bros.	Amador City	
Autumn leaves	Mrs. O. T. Wilson	Ione	
Hanging basket, with plants	Miss N. Adriance	Ione	
Floral design	Miss E. Woolsey	Ione	
Cut flowers	Miss E. Woolsey	Ione	
Lard	Mrs. J. W. Violett	Ione	
Wheat bread	Mrs. S. L. Black	Ione	
Raised biscuit	Mrs. D. Denney	Ione	
Graham bread	A. P. Harmon	Jackson	
Wheat bread	A. P. Harmon	Jackson	
Brown bread	Mrs. G. Withington	Ione	
Display of bread	A. P. Harmon	Jackson	

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
Best Silver prunes	Mrs. S. L. Black	Ione	
Best display of apples	Mrs. J. W. Violett	Ione	
Best display of plums	N. Foster	Lancha Plana	
Second best display of prunes	N. Foster	Lancha Plana	
Olives on branch	N. Foster	Lancha Plana	Sp. men.
Second best peaches	J. A. Goodding	Lancha Plana	
Best strawberries	J. A. Goodding	Lancha Plana	
Best peaches	H. & L. Northup	Lancha Plana	
Best nectarines	H. & L. Northup	Lancha Plana	
Best oranges	H. & L. Northup	Lancha Plana	
Best pears	Garibaldi Bros.	Amador City	
Best figs	Garibaldi Bros.	Amador City	
Second best apples	A. P. Harmon	Jackson	
Second best pears	Geo. Woolsey	Ione	
Second best plums	Geo. Woolsey	Ione	
Best blackberries	Geo. Woolsey	Ione	
Best raspberries	Geo. Woolsey	Ione	
Best pomegranates	Geo. Woolsey	Ione	
Fruit exhibit	G. & L. Tubbs	Ione	Sp. men.
Second best dried prunes	Mrs. S. L. Black	Ione	
Second best dried apples	A. B. McDonald	Ione	
Second best dried peaches	A. B. McDonald	Ione	
Best dried figs	N. Foster	Lancha Plana	
Best raisins	N. Foster	Lancha Plana	
Best black walnuts	J. A. Goodding	Lancha Plana	
Best soft-shell almonds	J. A. Goodding	Lancha Plana	
Best seedless raisins	D. Denney	Ione	
Best peanuts	Mrs. M. Kidd	Ione	
Best machine-dried apples	Geo. Woolsey	Ione	
Best machine-dried pears	Geo. Woolsey	Ione	
Best machine-dried peaches	Geo. Woolsey	Ione	
Best display of dried fruit	Geo. Woolsey	Ione	
Best sun-dried prunes	Geo. Woolsey	Ione	
Best English walnuts	Thos. Clifton	Ione	
Best display of fruits in jars	Mrs. J. W. Violett	Ione	
Second best display of jellies in glass	Mrs. J. W. Violett	Ione	
Best jellies in glass	J. A. Goodding	Lancha Plana	
Second best fruit in glass	Mrs. N. Foster	Lancha Plana	
Best display of jams in glass	H. & L. Northup	Lancha Plana	
Second best honey	A. P. Harmon	Jackson	
Best honey	John O'Haver	Ione	

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
White brandy	Geo. N. McKee	Cosumnes	\$5 00
White wine	N. Foster	Lancha Plana	\$3 00
White wine	N. Foster	Lancha Plana	\$3 00
White wine	Geo. Woolsey	Ione	\$3 00
White cider vinegar	Geo. Woolsey	Ione	Sp. men.

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
Woolen crochet skirt	Mrs. N. Gillis	Ione	\$2 50
Woolen stockings	Mrs. N. Gillis	Ione	\$1 50
Woolen work	Mrs. N. Gillis	Ione	\$1 50
Woolen work	Mrs. N. Gillis	Ione	\$1 60
Woolen lamp mat	Mrs. N. Gillis	Ione	\$1 00
Woolen panels and plaques	Mrs. H. Ward	May	\$2 50
Woolen pincushion	Mrs. M. W. Gordon	Ione	\$1 00
Woolenkerchief case	Mrs. M. W. Gordon	Ione	\$1 50
Woolenwork quilt	Mrs. E. H. Gordon	Jackson	\$2 00
Woolen afghan	Mrs. G. A. Gordon	Jackson	Sp. men.
Woolenkerchief box	Miss Carrie Bennetts	Ione	\$1 50
Woolen display of paper flowers	Miss Ethel Gregory	Ione	\$1 50
Woolen dress	Mrs. A. F. Nichols	Ione	\$1 50
Woolen embroidery	Mrs. R. H. Bayley	Ione	\$1 50
Woolen piano cover	Mrs. R. H. Bayley	Ione	\$2 50
Woolen picture	Mrs. R. H. Bayley	Ione	\$2 50
Woolen fire screen	Mrs. R. H. Bayley	Ione	\$2 50
Woolen display of fancy work	Mrs. G. Sutherland	Ione	\$5 00
Woolen chair set	Mrs. G. Sutherland	Ione	\$2 50
Woolen banner	Mrs. G. Sutherland	Ione	\$2 50
Woolen crazy quilt	Mrs. G. Sutherland	Ione	\$3 00
Woolen sofa cushion	Mrs. G. Sutherland	Ione	\$1 25
Woolen of kensington work	Mrs. G. Sutherland	Ione	\$1 50
Woolen cover	Mrs. G. Sutherland	Ione	\$1 50
Woolen lambrequins	Mrs. J. F. Scott	Ione	\$1 50
Woolen afghan	Miss Alice Prouty	Ione	\$2 50
Woolen spread	Mrs. J. H. Gregory	Ione	\$2 50
Woolen ladies' underwear	Mrs. G. Withington	Ione	\$2 50
Woolen shams	Mrs. M. Heffren	Ione	Sp. men.
Woolen shams	Mrs. O. T. Wilson	Ione	\$2 50
Woolen shams	Mrs. O. T. Wilson	Ione	\$1 00
Woolen shams	Mrs. O. T. Wilson	Ione	\$1 25
Woolen embroidery	Miss J. McDonald	Ione	\$1 50
Woolen tidy	Miss Lily Parks	Amador City	\$1 50
Woolen table cover	Miss Lily Parks	Amador City	\$2 50
Woolen panel	Miss Mary Brusie	Ione	Sp. men.
Woolen quilt	Mrs. L. McMurry	Ione	\$1 50
Woolen quilt	Mrs. J. W. Violett	Ione	Sp. men.
Woolen-made dress	Mrs. J. W. Violett	Ione	\$2 50
Woolen plaques	Mrs. C. T. LaGrave	Ione	Sp. men.
Woolen net work	Mrs. R. Schneebelly	Sutter Creek	\$2 00
Woolen lace work	Mrs. R. Schneebelly	Sutter Creek	\$2 00
Woolen shawl	Mrs. R. Schneebelly	Sutter Creek	\$2 50
Woolen bedspread	Mrs. R. Schneebelly	Sutter Creek	\$2 50
Woolen work	Mrs. U. S. Gregory	Ione	\$1 50
Woolen afghan	Mrs. U. S. Gregory	Ione	\$1 50
Woolen scarf	Mrs. A. J. Wood	Ione	\$2 50
Woolen quilt	Mrs. I. B. Gregory	Ione	Diploma.
Woolen bedspread	Mrs. Geo. Hansen	Jackson	Sp. men.
Woolen pillow shams	Miss Louise Cueneo	Sutter Creek	\$2 00
Woolen work, not entered for	Galt ladies	Galt	Sp. men.

SIXTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
JUVENILE.		
Best knit wool stockings	Miss Ada Gillis	Ione
Best rag mat	Miss Ada Gillis	Ione
Best crazy tidy	Miss B. Seguin	Ione
Best cotton embroidery	Miss B. Seguin	Ione
Best lace work	Miss Aida Ringer	Ione

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.
CLASS I.		
Black and white oil painting	Mrs. E. A. Cook	Ione
Best painting on textile fabrics	Mrs. M. W. Gordon	Ione
Second best oil painting (marine)	Dr. O. T. Wilson	Ione
Best collection of paintings	Dr. O. T. Wilson	Ione
Marine oil painting	Miss Mary Brusie	Ione
Collection of paintings	Miss Mary Brusie	Ione
Landscape painting	Mrs. C. T. LaGrave	Ione
Landscape painting	E. W. Perkins	Ione
Best oil painting (local subject)	Miss Ivy Mace	Sutter Creek
Best oil painting (landscape)	Mrs. H. M. Ward	May
Best water color painting	Geo. Hansen	Jackson
Exhibit of paintings, not entered for premium	Galt artists	Galt
CLASS II.		
Best crayon work	Mrs. E. A. Cook	Ione
Best pastel work	Miss Lucy Luse	Ione
Best pencil drawing	Miss Mary Brusie	Ione
CLASS III.		
Best oil painting (copy)	Dr. O. T. Wilson	Ione
Best water color painting	Miss Mary Brusie	Ione
Best collection of paintings	Mrs. C. T. LaGrave	Ione
Best kensington painting	Mrs. J. F. Scott	Ione
JUVENILE.		
Best oil painting (original)	C. M. Adriance	Ione
Best oil painting (copy)	C. M. Adriance	Ione
Best animal drawing in pencil	C. M. Adriance	Ione
Best landscape drawing in pencil	C. M. Adriance	Ione
PHOTOGRAPHS.		
Best collection of photographs and photographic views	C. Sutterley	Ione

SPEED PROGRAMME.

TUESDAY, AUGUST 5, 1890.

RACE No. 1—RUNNING.

For all. Forty dollars entrance; fifteen dollars forfeit; one hundred and seventy-five dollars added; of which fifty dollars to second. One and one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
F. h. m., by Wildidle; dam, Sally Hart.	James H. Muse	Sacramento.
ch. m., by Bob Wooding; dam, Lizzie Hall.	William Boots	Milpitas.
ch. c., by Young Bazaar; dam, Lost	P. Siebenthaler	Sacramento.
br. m., by Wildidle; dam, by Monday.	W. L. Appleby	Santa Clara.
br. s., by Joe Daniels; dam, Sister to Douglas.	Dennison Bros.	Sacramento.
ch. g., by Shiloh; dam, Margery	Percy Williams	Stockton.

SUMMARY.

Mirata	1
Tyoon	2
Time—1:57.	

RACE No. 2—RUNNING.

For all two-year olds. Twenty-five dollars entrance; ten dollars forfeit; one hundred and twenty-five dollars added; of which forty dollars to second. Five eighths of a

Name and Pedigree of Horse.	By Whom Entered.	Address.
of Milpitas, b. c., by Duke of Norfolk; typey	William Boots	Milpitas.
ch. m., by Prince of Norfolk; dam, Idle.	Dennison Bros.	Sacramento.
by Kyle Daly; dam, Rachel	Percy Williams	Stockton.
ch. c., by Billy Bolinger; dam, Della	M. T. Walters	Sacramento.
Chief, b. s., by Jim Patterson; dam, Brown	S. Summake	Calaveras City.

SUMMARY.

Duke of Milpitas	1
Minnie B	2
Time—1:04.	

RACE No. 3—RUNNING.

For named horses. Fifty dollars to first; twenty dollars to second; five dollars to third. One quarter mile heats.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Hawthorne, s. g., by Humboldt; dam, by Lummix	James Morris	Plymouth
Comet, b. s., by Lummix; dam, by Jeff Davis	E. E. Randle	San Francisco
Wait-a-Bit, b. s., by Nathan Coombs; dam, unknown	F. Leininger	San Francisco
Sleepy Dan, br. g., by Patterson; dam, unknown	F. M. Ferguson	San Francisco

SUMMARY.

Hawthorne	1 1
Sleepy Dan	3 2
Wait-a-Bit	4 3
Comet	2 dr.

Time—0:23½; 0:23½.

WEDNESDAY, AUGUST 6, 1890.

SPECIAL RUNNING.

Stake, seventy-five dollars; entrance, seven dollars and fifty cents; sixty dollars added; of which fifty dollars to second; ten dollars to third. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sir Reginald, s. g., by Joe Hooker	Walter Masten	Sacramento
Vinco, b. g., by Bob Wooding	William Boots	San Francisco
Silver Bow, by J. M. Hector; dam, Belle of the Mead	J. N. Van Winkle	Sacramento
Strawbuck, b. g., by Jim Patterson	— Little	Copperopolis

SUMMARY.

Vinco	1
Silver Bow	2
Strawbuck	3
Sir Reginald	0

RACE No. 4—RUNNING.

Free for all. Twenty-five dollars entrance; ten dollars forfeit; one hundred dollars added; of which fifty dollars to second. Nine sixteenths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lyda Ferguson, s. m	Percy Williams	San Francisco
Installation, br. s., by Inauguration; dam, Brown Maria	William Boots	San Francisco
Juniata, br. m., by Wildidle; dam, by Monday	W. L. Appleby	San Francisco

SUMMARY.

Lyda Ferguson	1
Installation	2
Juniata	3

Time—0:56½.

RACE No. 5—RUNNING.

Free for all. Thirty dollars entrance; fifteen dollars forfeit; one hundred and seventy dollars added; of which fifty dollars to second. Three quarters of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Joe Daniels; dam, by Parti-	J. J. Dolan	Modesto.
by Norfolk; dam, Irene Harding.	Dennison Bros.	Sacramento.
by Joe Hooker; dam, Kate	Percy Williams	Stockton.
by Pill Box; dam, Della Walker.	M. T. Walters	Sacramento.
by Nathan Coombs; dam, Beauty	William Boots	Milpitas.

SUMMARY.

by Joe Daniels	3 1 1
by Norfolk	1 4 2
by Joe Hooker	2 2 r. o.
by Pill Box	4 3 r. o.
by Nathan Coombs	5 5 r. o.

Time—1:15½; 1:15; 1:18.

RACE No. 6—RUNNING.

Free for all. Forty dollars entrance; fifteen dollars forfeit; two hundred dollars added; of which fifty dollars to second. One and one quarter miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Joe Daniels; dam, Sister to	Dennison Bros.	Sacramento.
by Wildidle; dam, Sally Hart.	James H. Muse	Sacramento.
by Young Bazaar; dam, Lost	P. Siebenthaler	Sacramento.
by Thad Stevens; dam, Gypsy	William Boots	Milpitas.
by Wildidle; dam, by Monday	W. L. Appleby	Santa Clara.

SUMMARY.

by Joe Daniels	1
by Wildidle	2
by Young Bazaar	3
by Thad Stevens	0
by Wildidle	0

Time—2:09½.

THURSDAY, AUGUST 7, 1890.

SPECIAL RUNNING.

Free for all. Twenty-five dollars; entrance, seven dollars and fifty cents. Three eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
by Humboldt; dam, by Lum-	W. B. Sanborn	Sacramento.
by Jim Patterson	James Morris	Plymouth.
by Compromise; dam,	J. Neeley	Copperopolis.
by	— Phillips	

SUMMARY.

Hawthorne.....	1 1
Strawbuck.....	3 2
Lucky Dan.....	4 3
Inkerman.....	2 4

Time—0:36½; 0:36½.

RACE No. 8—RUNNING.

Free for all two-year olds. Twenty-five dollars entrance; ten dollars forfeit; one hundred and fifty dollars added; of which fifty dollars to second. Three fourths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Minnie B, ch. m., by Prince of Norfolk; dam, Lizzie Idle.....	Dennison Bros.....	Sacramento.
Altus, b. g., by Billy Bolinger; dam, Della Walker.....	M. T. Walters.....	Sacramento.
Duke of Milpitas, b. c., by Duke of Norfolk; dam, Gypsy.....	Wm. Boots.....	Milpitas.

SUMMARY.

Duke of Milpitas.....	1
Altus.....	2
Minnie B.....	3

Time—1:18.

RACE No. 9—RUNNING.

Free for all. Forty dollars entrance; twenty dollars forfeit; two hundred dollars added; of which seventy-five dollars to second. One mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Dave Douglas, b. g., by Leinster; dam, Lily Simpson.....	Dennison Bros.....	Sacramento.
Tycoon, ch. g., by Shiloh; dam, Margery.....	Percy Williams.....	Stockton.

SUMMARY.

Tycoon.....	1 1
Dave Douglas.....	2 2

Time—1:48½; 1:46½.

FRIDAY, AUGUST 8, 1890.

RACE No. 10—SPECIAL TROTTING AND PACING.

For local roadsters. Purse, thirty dollars. Mile heats, best two in three. Distance waived.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Jack the Ripper, r. g.....	M. Corbell.....	Sutter Creek.
Baldwin, blk. g.....	A. S. Hartwick.....	Amador City.
Diamond, s. g.....	Jas. Morris.....	Plymouth.
One Maid, br. m., by Berlin; dam, Lou, by Dave Hill.....	C. T. La Grave.....	.....

SUMMARY.

One Maid.....	1 1
Jack the Ripper.....	2 2
Diamond.....	3 3
Baldwin.....	4 4

Time—3:16½; 3:12½.

RACE No. 11—RUNNING.

Free for all. Twenty-five dollars entrance; ten dollars forfeit; one hundred and fifty dollars added; of which fifty dollars to second. Five eighths of a mile and repeat.

Name and Pedigree of Horse.	By Whom Entered.	Address.
One Maid, b. g., by Joe Daniels; dam, by.....	J. J. Dolan.....	Modesto.
Ferguson, s. m.....	Percy Williams.....	Stockton.
One Maid, b. g., by Pill Box; dam, Della Walker.....	M. T. Walters.....	Sacramento.
One Maid, b. g., by Bob Wooding; dam, Mollie H.....	Wm. Boots.....	Milpitas.

SUMMARY.

One Maid.....	2 0 1 1
Ferguson.....	1 0 2 2
One Maid.....	3 3 r. o.
One Maid.....	4 4 r. o.

Time—1:02½; 1:01½; 1:04½; 1:18½.

RACE No. 12—RUNNING.

Free for all. Fifty dollars entrance, ten dollars declaration; two hundred dollars added; of which seventy-five dollars to second. One and three eighths miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Dave Douglas, b. g., by Leinster; dam, Lily Simpson.....	Dennison Bros.....	Sacramento.
Tycoon, ch. g., by Shiloh; dam, Margery.....	Percy Williams.....	Stockton.
One Maid, b. g., by Nathan Coombs; dam, Beauty.....	William Boots.....	Milpitas.
One Maid, b. g., by Wildidle.....	W. L. Appleby.....	Santa Clara.

SUMMARY.

Tycoon.....	1
Wild Oats.....	2
One Maid.....	3
Dave Douglas.....	0

Time—2:24.

RACE No. 13—RUNNING.

For all ages. Free purse, one hundred and twenty-five dollars; of which twenty-five dollars to second. Horses that have started at this meeting and been beaten can be allowed five pounds; twice, seven pounds. Seven eighths of a mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Retta B, s. m., by Kyrle Daly; dam, Rachel.	Percy Williams	Stockton
Juniata, b. m., by Wildidle; dam, by Monday.	W. L. Appleby	Santa Clara
Hernando, b. g., by Wildidle; dam, by Victory.	J. H. Muse	Sacramento
Fanny F, b. m., by Wildidle; dam, Sally Hart.	J. H. Muse	Sacramento
Installation, br. f., by Inauguration; dam, Brown Maria	William Boots	Milpitas

SUMMARY.

Fanny F	1
Installation	2
Retta B	3
Juniata	0
Hernando	0

Time—1:29½.

SATURDAY, AUGUST 9, 1890.

SPECIAL RUNNING.

Free purse, fifty dollars. First horse, twenty-five dollars; second, fifteen dollars; third, ten dollars. One half mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Sir Reginald, s. g., by Joe Hooker	W. Masten	Sacramento
Strawbuck, b. g., by Jim Patterson	J. Neeley	Copperopolis
Lucky Dan, b. g., by Compromise; dam, Frankie Devine	E. E. Randle	San José

SUMMARY.

Sir Reginald	1
Lucky Dan	2
Strawbuck	3

Time—0:49.

SPECIAL RUNNING.

Owners' Handicap. Free purse, fifty dollars. One mile.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Juniata, b. m., by Wildidle; dam, by Monday	W. L. Appleby	Santa Clara
Nerva, ch. m., by Bob Wooding; dam, Lizzie Marshall	William Boots	Milpitas

SUMMARY.

Nerva	1
Juniata	2

Time—1:45.

SPECIAL RUNNING.

Free purse, seventy-five dollars. Ten pounds below scale of weights. One and one eighth miles.

Name and Pedigree of Horse.	By Whom Entered.	Address.
Lucky Dan, b. g., by Compromise; dam, Frankie Devine	E. E. Randle	San José
Lucky Dan, b. g., by Thad Stevens; dam, Gypsy	William Boots	Milpitas
Lucky Dan, b. m., by Wildidle; dam, Sally Hart	J. H. Muse	Sacramento

SUMMARY.

Fanny F	1
Lucky Dan	2
Lucky Dan	3

Time—1:50½.

TRANSACTIONS

OF THE

SEVENTY-SEVENTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of Shasta.

REPORT.

REDDING, November 15, 1890.

OFFICERS OF THE ASSOCIATION.

ANDREW C. BRIGMAN.....President
HARTLEY R. HODSON.....Secretary
FRED. GROTEFEND.....Treasurer

The honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Twenty-seventh District Agricultural Association submit this, their report of the transactions of said Association, for the year ending this date.

HARTLEY R. HODSON,
Secretary.

DIRECTORS.

A. C. BRIGMAN.....Redding
HON. T. W. H. SHANAHAN.....Anderson
L. F. BASSETT.....Redding
HY. CLINESCHMIDT.....Redding
J. E. REYNOLDS.....Redding
C. K. McELWEE.....Redding
H. F. ROSS.....Milwaukie
C. J. BECKER.....Cottonwood

RECEIPTS AND EXPENDITURES.

Receipts.

membership tickets.....	\$160 00
Pavilion door receipts.....	185 75
State appropriation.....	2,250 00
	<u>\$2,595 75</u>

Expenditures.

premiums.....	\$1,411 00
land.....	200 00
land of Pavilion.....	150 00
number for Pavilion.....	53 60
tools, etc., for Pavilion.....	9 25
main and ribbon for Pavilion.....	68 40
band hire and music.....	8 75
keepers, watchmen, and carpenters.....	154 35
stage.....	23 75
electric light and water.....	95 00
.....	20 00
printing and advertising.....	153 65
.....	150 00
Assistant Secretary and Superintendent of Pavilion.....	100 00
	<u>\$2,595 75</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II.			
Graded stallion, three years old and over	W. H. Kenyon	Buckeye	\$10
Graded mare, two years old and over	Deistelehorst Bros.	Redding	\$5
CLASS IV.			
Draft stallion, three years old and over	John Dexter	Eagle Creek	\$10
Draft mare, three years old and over	M. T. Kite	Redding	\$5
CLASS V.			
Roadster mare, three years old and over	M. T. Kite	Redding	\$10
Roadster mare, two years old	Ben Oliver	Redding	\$5
Roadster team	L. Schneider	Redding	\$10
CATTLE—CLASS XII—JERSEYS.			
Bull, three years old and over	M. T. Kite	Redding	\$10
Cow, three years old and over	M. T. Kite	Redding	\$10
Cow, two years old	M. T. Kite	Redding	\$7
Cow, one year old	M. T. Kite	Redding	\$5
CLASS XVII—HOLSTEINS.			
Bull, three years old and over	Deistelehorst Bros.	Redding	\$10
Cow, three years old and over	Deistelehorst Bros.	Redding	\$10
Cow, two years old	Deistelehorst Bros.	Redding	\$7
Heifer	Deistelehorst Bros.	Redding	\$5
CLASS XVIII—GRADED.			
Cow, three years old and over	M. T. Kite	Redding	\$7
Cow, two years old	M. T. Kite	Redding	\$5
Cow, one year old	M. T. Kite	Redding	\$5
CLASS XXV—POULTRY.			
Trio White Leghorn fowls	R. M. Bates	Redding	\$5
Trio Plymouth Rock fowls	F. C. Hoy	Redding	\$5
Trio Brown Leghorn fowls	M. T. Kite	Redding	\$5
Trio Light Brahma fowls	M. T. Kite	Redding	\$5
Trio Buff Cochins fowls	M. T. Kite	Redding	\$5
Trio Bronze turkeys	R. M. Bates	Redding	\$5
Trio Pekin ducks	Ben Oliver	Redding	\$5
Trio China Gray geese	Ben Oliver	Redding	\$5

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Club wheat	J. N. Logan	Redding	1st
Snowflake wheat	J. N. Logan	Redding	2d
Chili wheat	W. H. Myers	Millville	3d
Best exhibit of wheat	W. H. Myers	Millville	4th

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II.			
.....	L. Schneider	Redding	\$1 50
.....	W. H. Myers	Millville	\$1 50
.....	W. H. Myers	Millville	\$1 00
.....	W. H. Myers	Millville	\$1 50
.....	W. H. Myers	Millville	\$10 00
.....	H. E. Buszdiecker	Whitmore	\$1 50
CLASS IV.			
.....	J. N. Logan	Redding	\$1 50
.....	W. H. Myers	Millville	\$2 00
CLASS V.			
.....	M. T. Kite	Redding	\$1 00
.....	Sol. Hufford	Oak Run	\$0 50
.....	Wm. Falke	Redding	\$1 00
.....	F. W. Fish & Sons	Stillwater	\$1 00
.....	J. N. Logan	Redding	\$1 00
.....	W. H. Myers	Millville	\$2 50
.....	R. M. Saeltzer	Redding	\$5 00
.....	F. W. Fish & Sons	Stillwater	\$0 50
.....	R. M. Bates	Redding	\$0 50
.....	R. M. Bates	Redding	\$0 50
.....	J. N. Logan	Redding	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	J. N. Logan	Redding	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	F. W. Fish & Sons	Stillwater	\$0 50
.....	M. T. Kite	Redding	\$0 50
.....	M. T. Kite	Redding	\$0 50
.....	M. T. Kite	Redding	\$0 50
.....	M. T. Kite	Redding	\$0 50
.....	R. M. Bates	Redding	\$0 50
.....	F. W. Fish & Sons	Stillwater	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	J. N. Logan	Redding	\$0 50
.....	Sol. Hufford	Oak Run	\$0 50
.....	Sol. Hufford	Oak Run	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	W. H. Myers	Millville	\$0 50
.....	Sol. Hufford	Oak Run	\$0 50
.....	F. W. Fish & Sons	Stillwater	\$0 50
.....	F. W. Fish & Sons	Stillwater	\$0 50
.....	W. H. Myers	Millville	\$10 00
.....	W. H. Myers	Millville	\$40 00
.....	F. W. Fish & Sons	Stillwater	\$30 00
.....	Sol. Hufford	Oak Run	\$20 00
CLASS VI.			
.....	W. H. Myers	Millville	\$3 00
.....	J. N. Logan	Redding	\$2 00
.....	J. N. Logan	Redding	\$2 00
CLASS VIII.			
.....	Mrs. J. Ashfield	Redding	\$5 00
CLASS IX.			
.....	Sol. Hufford	Oak Run	\$7 50
.....	F. W. Fish & Sons	Stillwater	\$5 00
.....	W. H. Myers	Millville	\$2 50
.....	F. W. Fish & Sons	Stillwater	\$7 50
.....	W. H. Myers	Millville	\$5 00
.....	Ben Oliver	Redding	\$2 50
.....	Hy. Stacher	Millville	\$5 00
.....	W. H. Myers	Millville	\$3 00
.....	M. T. Kite	Redding	\$2 00

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.
Finest variety of peaches	Hy. Stacher	Millville
Best quinces	Dr. J. H. Miller	Redding
Second best	Sol. Hufford	Oak Run
Third best	Ben Oliver	Redding
Best plums	F. W. Fish & Sons	Stillwater
Second best	W. H. Myers	Millville
Third best	J. N. Logan	Redding
Best blackberries	J. N. Logan	Redding
Best raspberries	A. M. Newton	Anderson
Best figs	F. W. Fish & Sons	Stillwater
Best pomegranates	R. Bostwick	Redding
Finest display of green fruits	F. W. Fish & Sons	Stillwater
Second best	W. H. Myers	Millville
Third best	Sol. Hufford	Oak Run
CLASS X.		
Best table grapes	L. Schneider	Redding
Second best	F. W. Fish & Sons	Stillwater
Third best	F. C. Hoy	Redding
Best raisin grapes	F. W. Fish & Sons	Stillwater
Second best	L. Schneider	Redding
Third best	F. C. Hoy	Redding
Best wine grapes	F. W. Fish & Sons	Stillwater
Second best	L. Schneider	Redding
Third best	F. C. Hoy	Redding
Best seedless grapes	W. K. Reed	Millville
Second best	F. W. Fish & Sons	Stillwater
Third best	L. Schneider	Redding
Best single bunch grapes, five pounds	L. Schneider	Redding
Second best	F. W. Fish & Sons	Stillwater
Third best	F. C. Hoy	Redding
Best Shasta County wine	Geo. Loeffler	Igo
Second best	F. W. Fish & Sons	Stillwater
Third best	Wm. Falke	Redding
Best Shasta County brandy	Geo. Loeffler	Igo
Finest display of grapes	F. W. Fish & Sons	Stillwater
Second best	F. C. Hoy	Redding
Third best	L. Schneider	Redding
CLASS XI.		
Best preserves	W. H. Myers	Millville
Second best	L. Schneider	Redding
Third best	W. K. Reed	Millville
Best jams	Miss Minnie White	Redding
Second best	Miss Veva Garden	Redding
Third best	Mrs. Jas. Ashfield	Redding
Best jellies	W. K. Reed	Millville
Second best	Miss Minnie White	Redding
Third best	L. Schneider	Redding
Fourth best	Mrs. H. E. Parker	Redding
Best sour pickles	W. H. Myers	Millville
Second best	L. Schneider	Redding
Third best	W. K. Reed	Millville
Best sweet pickles	Miss Minnie White	Redding
Second best	W. H. Myers	Millville
Third best	M. T. Kite	Redding
Best honey	R. Bostwick	Redding
Second best	W. H. Myers	Millville
Finest general display of canned fruits	Miss Minnie White	Redding
Second finest	W. K. Reed	Millville
Third finest	W. H. Myers	Millville
Best mango pickles	Mrs. C. C. Bush	Redding
CLASS XII.		
Best dried apples	F. W. Fish & Sons	Stillwater
Best dried peaches	F. W. Fish & Sons	Stillwater
Best dried plums	F. W. Fish & Sons	Stillwater
Best dried prunes	F. W. Fish & Sons	Stillwater
Best dried nectarines	F. W. Fish & Sons	Stillwater
Best dried figs	F. W. Fish & Sons	Stillwater

SECOND DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Best pears	F. W. Fish & Sons	Stillwater	\$3 00
Best grapes	F. W. Fish & Sons	Stillwater	\$3 00
Best blackberries	W. H. Myers	Millville	\$3 00
Best display of raisins	F. W. Fish & Sons	Stillwater	\$10 00
Best display of dried fruits	F. W. Fish & Sons	Stillwater	\$10 00
CLASS XIII.			
Best shell almonds	R. Bostwick	Redding	\$3 00
Best shell almonds	G. W. Bush	Redding	\$2 00
Best shell almonds	F. W. Fish & Sons	Stillwater	\$1 00
Best shell almonds	Miss Jennie Bell	Shasta	\$3 00
Best shell almonds	F. C. Hoy	Redding	\$2 00
Best shell almonds	J. C. Duncan	Redding	\$1 00
Best walnuts	W. H. Myers	Millville	\$3 00
Best walnuts	W. H. Myers	Millville	\$3 00
Best walnuts	M. T. Kite	Redding	\$2 00
Best walnuts	W. H. Myers	Millville	\$5 00
Best walnuts	G. W. Bush	Redding	\$3 00
CLASS XIV.			
Best display of cut flowers	Mrs. E. A. Reid	Redding	\$2 00
Best display of cut flowers	Mrs. Cal. Owings	Redding	\$1 00
Best display of flowering plants	Mrs. C. N. Dustin	Redding	\$2 00
Best display of flowering plants	Mrs. S. J. R. Gilbert	Redding	\$1 00
Best display of flowering plants	Mrs. J. N. Major	Redding	\$2 00
Best display of flowering plants	W. L. Groves	Redding	\$2 00
Best display of flowering plants	Mrs. T. J. Houston	Redding	\$1 00
CLASS XV.			
Best display of domestic bread	Mrs. F. C. Hoy	Redding	\$2 00
Best display of domestic bread	Miss E. Major	Redding	\$1 00
Best display of domestic bread	Miss E. Major	Redding	\$1 00
Best display of domestic bread	Mrs. J. Ashfield	Redding	\$1 00
Best display of domestic bread	Mrs. W. E. Hopping	Redding	\$1 00
Best display of domestic bread	Mrs. J. Ashfield	Redding	\$1 00
Best display of domestic bread	Mrs. H. E. Parker	Redding	\$1 00
CLASS XVI.			
Best display of wheat bread	Sarah Oliver	Redding	\$1 00
Best display of wheat bread	Sarah Oliver	Redding	\$1 00
Best display of wheat bread	Sarah Oliver	Redding	\$1 00

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
(without bees)	R. Bostwick	Redding	\$3 00
	Wm. George	Redding	\$10 00

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II.			
Hollow plated ware	W. D. Nunamaker	Redding	\$2 00
Plated ware	W. D. Nunamaker	Redding	\$3 00
Plated ware	W. D. Nunamaker	Redding	\$3 00
CLASS V.			
Harness	T. J. Houston	Redding	\$5 00
Double harness	T. J. Houston	Redding	\$2 50

FOURTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Exhibit of single harness	T. J. Houston.....	Redding	\$2 00
Saddle	T. J. Houston.....	Redding	\$2 00
Lady's saddle	T. J. Houston.....	Redding	\$2 00
CLASS IX.			
Sporting instruments.....	G. W. Bush.....	Redding	\$2 00
CLASS XI.			
Musical instruments.....	G. W. Bush.....	Redding	\$2 00
CLASS XII.			
Confectioner's work	G. W. Bush.....	Redding	\$2 00
CLASS XIII.			
Yeast powder.....	W. K. Reed.....	Millville	\$2 00

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS III.			
Hand-made stockings	Mrs. W. Andrew.....	Stella	\$2 00
Ten yards rag carpet	Mrs. J. Ashfield.....	Redding	\$2 00
CLASS IV.			
White bedspread	Mrs. Donahue	Redding	\$2 00
Pair pillow shams	Mrs. J. Garden	Redding	\$2 00
Made underwear for lady	Miss S. Schneider.....	Redding	\$2 00
Made dress for child	Mrs. J. Ashfield.....	Redding	\$2 00
Worked bedquilt	Mrs. S. J. R. Gilbert.....	Redding	\$2 00
Patchwork quilt	Mrs. O. E. Nash	Redding	\$2 00
Knit bedspread	Mrs. D. Gilbert	Redding	\$2 00
Lounge cover	Miss A. Keis	Redding	\$2 00
Pair curtains	Mrs. O. G. Gleaves.....	Redding	\$2 00
CLASS V.			
Silk embroidery	Miss L. Andrews	Redding	\$2 00
Outline embroidery	Mrs. W. Andrew	Stella	\$2 00
Outline embroidery	Miss M. White	Redding	\$2 00
Piano cover	Miss E. Bush	Redding	\$2 00
Sofa cushion	Mrs. W. Andrew	Stella	\$2 00
Embroidered table cover	Mrs. McConnell	Redding	\$2 00
Embroidered mantle	Mrs. O. G. Gleaves.....	Redding	\$2 00
Silk embroidered banner	Mrs. McConnell	Redding	\$2 00
Embroidered banner	Mrs. W. D. Bieglo	Redding	\$2 00
Display of ladies' fancy and ornamental work	Miss E. Bush	Redding	\$2 00
CLASS VI.			
Crochet work	Mrs. Donahue	Redding	\$2 00
Worsted work	Mrs. L. Schneider.....	Redding	\$2 00
Lace work	Miss J. Wilbur	Redding	\$2 00
Knit stockings	Mrs. L. Schneider.....	Redding	\$2 00
Crochet shawl	Mrs. A. W. Chappell.....	Redding	\$2 00
Finest display of needle and fancy work	Miss J. Wilbur	Redding	\$2 00
CLASS VII.			
Worcester tidy	Miss S. Oliver	Reddin	\$2 00
Afghan	Mrs. W. Andrew	Stella	\$2 00
Ottoman cover	Miss J. Wilbur	Redding	\$2 00
Pincushion	Miss J. Wilbur	Redding	\$2 00
Fancy tidy	Miss A. Keis	Redding	\$2 00
Braid work	Mrs. J. Bean	Redding	\$2 00
Sofa cover	Miss A. Keis	Redding	\$2 00
Cotton tidy	Miss E. Bush	Redding	\$2 00

JUVENILE DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Miss N. Ashfield.....	Redding	\$2 00	
Miss Olive Swasey	Redding	\$1 00	
Miss I. Ashfield.....	Redding	\$1 00	
Orr. Chenowith	Redding	\$1 00	
Miss Eda Breslauer	Redding	\$2 00	
Miss Eda Breslauer	Redding	\$1 00	
Miss E. Hampton	Redding	\$1 00	
Miss S. Breslauer	Redding	\$1 00	
Miss S. Breslauer	Redding	\$1 00	
Miss S. Gilbert	Redding	\$1 00	
Miss Jennie Bell	Redding	\$2 00	
Mrs. J. Garden	Redding	\$2 00	
CLASS II.			
Miss A. Swasey	Redding	\$5 00	
Miss E. McConnell	Redding	\$4 00	
Miss I. Ashfield.....	Redding	\$3 00	
Miss L. Swasey	Redding	\$2 00	
Miss N. Ashfield.....	Redding	\$1 00	

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Collection of photographic views	J. C. Franklin	Redding	\$5 00
CLASS II.			
Miss Eda Bush	Redding	\$3 00	
J. C. Franklin	Redding	\$2 00	
J. C. Franklin	Redding	\$3 00	
Mrs. C. Russell	Redding	\$5 00	
Mrs. C. Russell	Redding	\$3 00	
CLASS III.			
Miss M. Porter	Redding	\$3 00	
Miss M. Porter	Redding	\$2 00	
Charlie Gleaves	Redding	\$1 00	
CLASS IV.			
Miss M. White	Redding	\$1 00	
E. Anderson	Redding	\$5 00	
CLASS V.			
G. A. Poor	Redding	\$3 00	
G. A. Poor	Redding	\$3 00	
G. A. Poor	Redding	\$2 00	

SEVENTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
Miss Jennie Bell	Shasta	\$30 00	
Miss Jennie Bell	Shasta	\$20 00	
Miss Jennie Bell	Shasta	\$20 00	
W. Dunham	Igo	\$50 00	

EIGHTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
SCHOOL DISTRICTS.			
Best display by school district.....	Millville	Millville	\$75 00
Second best.....	Union	Stillwater.....	\$50 00
Third best.....	Clear Creek	Redding.....	\$40 00
Fourth best.....	Round Mountain	Round Mountain.....	\$30 00
Fifth best.....	Pacheco.....	Redding.....	\$20 00

SEWING MACHINE CONTEST, IN PAVILION.

Premium.	Operator.	Address.	Award.
First.....	Miss Lulu Swasey ..	Redding.....	\$3 00
Second	Miss Alice Swasey ..	Redding.....	\$2 00

TRANSACTIONS

OF THE

TWENTY-EIGHTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the County of San Bernardino.

OFFICERS OF THE ASSOCIATION.

L. M. HOLT.....President
J. A. CRAWFORD.....Secretary
FARMERS EXCHANGE BANK.....Treasurer

DIRECTORS.

L. M. HOLT.....San Bernardino
COL. W. R. TOLLES.....San Bernardino
R. F. CUNNINGHAM.....San Bernardino
RICHARD GIRD.....China
GEORGE L. JOY.....South Riverside
I. N. HOAG.....Redland
E. ROSENTHAL.....Riverside
P. K. KLINEFELTER.....Riverside

REPORT.

SAN BERNARDINO, November 15, 1890.

In honor of the State Board of Agriculture:

GENTLEMEN: The Directors of the Twenty-eighth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

J. A. CRAWFORD,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

Sale of tickets at Pavilion	\$703 70
Sale of tickets at Park	946 50
Sale of tickets by Motor Company	224 05
Amount of State appropriation to be received	2,250 00
	<u>\$4,124 25</u>

Expenditures.

For premium list	\$1,221 00
For rent of Park and Pavilion	1,305 00
For general expenses at Park and Pavilion	1,608 90
	<u>\$4,134 90</u>

PREMIUMS AWARDED—1890.

DIVISION A.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II—STANDARD-BRED.			
Christmas, stallion	J. W. Sayward	Riverside	\$10 00
Raymond, stallion	J. A. Cole	San Bernardino	\$20 00
Filly, one year old	M. A. Murphy	Colton	\$10 00
Filly, one year old	J. W. Waters	San Bernardino	\$5 00
Mare, four years old and over	N. M. Strong	San Bernardino	\$20 00
Mare, three years old	M. A. Murphy	Colton	\$10 00
Colt	N. M. Strong	San Bernardino	\$10 00
Colt	T. J. Pullen	Riverside	\$5 00
CLASS IV—MATCHED HORSES.			
Pair geldings	C. W. Mettler	San Bernardino	\$20 00
Pair geldings	G. A. Attwood	San Bernardino	\$10 00
CLASS VI—DRAFT HORSES—STALLIONS.			
Prince Dandy	D. M. Johnson	El Casco	\$20 00
Red Lion	G. A. Attwood	San Bernardino	\$15 00
MARES.			
Bird	Ed. Folley	San Bernardino	\$15 00
Kate	Jas. Boyd	Riverside	\$10 00
NON-STANDARD BROOD MARES.			
Gypsy and two colts	B. Davies	Colton	\$10 00
Bessie	M. A. Murphy	Colton	\$5 00

DIVISION B.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II—JERSEYS—BULLS.			
Mose	W. G. Whiting	San Bernardino	\$15 00
	J. B. Burkhart	Rincon	\$20 00
COWS.			
Florine	A. B. Wise	San Bernardino	\$15 00
CLASS IV—HOLSTEINS—BULLS.			
Earl of Arsem	J. C. Thorn, Jr.	Colton	\$15 00
Pickwadom	Holstein Dairy	San Bernardino	\$20 00

DIVISION D.

Exhibit.	Exhibitor.	Address.	Award.
SWINE.			
Pen Yorkshire hogs	Mrs. Eckles	Glendora	\$10 00

DIVISION E.

Exhibit.	Exhibitor.	Address.	Award.
POULTRY.			
Plymouth Rocks	Samuel Rolfe	San Bernardino	\$4 00

DIVISION F.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II.			
Box of roots and vegetables	Chino Ranch	Chino	\$25 00
Best and largest pumpkins	S. H. Barrett	East Highlands	\$25 00
Best and largest watermelons	Mrs. J. J. Marcher	Rialto	\$5 00
CLASS III.			
Box of flowering plants	Morris & Snow	Rialto	\$10 00
Box of cut flowers	Mrs. W. J. Wilsey	Mount Vernon	\$10 00

DIVISION G.

Exhibit.	Exhibitor.	Address.	Award.
CLASS II—DAIRY PRODUCE.			
Butter	Holstein Dairy	San Bernardino	\$10 00
CLASS IV—BREAD.			
White bread	Mrs. Seth Marshall	San Bernardino	\$2 50
White brown bread	Mrs. A. W. Cottrell	Riverside	\$2 50
White plain cake	Mrs. W. J. Wilsey	San Bernardino	\$2 50

DIVISION H.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I—GREEN FRUITS.			
Box of apples	Jas. Birch	Yucaipe	\$10 00
Box of apples	A. Harrison	Valley View	\$5 00
Box of grapes	J. M. Morris	San Bernardino	\$10 00
Box of grapes	Jas. Boyd	Riverside	\$5 00
PRESERVES, JELLIES, PICKLES, ETC.			
Box of fruits in glass	Mrs. H. A. Morris	San Bernardino	\$20 00
Box of fruits in glass	Mrs. L. S. Abel	Colton	\$10 00
Box of fruits in glass	Mrs. A. W. Cottrell	Riverside	\$5 00
Box of jellies in glass	Jas. Boyd	Riverside	\$20 00
Box of jellies in glass	Mrs. A. W. Cottrell	Riverside	\$10 00
Box of jellies in glass	Mrs. W. A. Harris	San Bernardino	\$5 00
Box of jams in glass	Mrs. A. W. Cottrell	Riverside	\$20 00
Box of jams in glass	Jas. Boyd	Riverside	\$10 00
Box of pickles in glass	Mrs. H. A. Morris	San Bernardino	\$20 00
Box of pickles in glass	Mrs. A. W. Cottrell	Riverside	\$10 00
Box of pickles in glass	Mrs. M. E. King	San Bernardino	\$5 00

DIVISION H—Continued.

Exhibit.	Exhibitor.	Address.	Award.
DRIED FRUITS.			
Best twenty-five pounds peeled peaches	S. H. Barrett	East Highlands	\$40 00
Second best	R. F. Cunningham	South Harlem	\$20 00
Third best	D. K. Patterson	South Harlem	\$10 00
Best twenty-five pounds unpeeled peaches	S. H. Barrett	East Highlands	\$40 00
Second best	R. F. Cunningham	South Harlem	\$20 00
Third best	T. J. Mellen	Beaumont	\$10 00
Best twenty-five pounds apricots	R. F. Cunningham	South Harlem	\$40 00
Second best	A. H. Palmer	Ontario	\$20 00
Third best	E. G. Naramore	Cucamonga	\$10 00
Best twenty-five pounds prunes	E. G. Naramore	Cucamonga	\$20 00
Second best	T. J. Mellen	Beaumont	\$10 00
Third best	C. P. Barrows Fruit Co.	San Bernardino	Dip. 400
Best twenty-five pounds pitted plums	T. J. Mellen	Beaumont	\$10 00
Second best	A. H. Palmer	Ontario	\$20 00
Best twenty-five pounds pears	T. J. Mellen	Beaumont	\$10 00
Second best	D. K. Patterson	South Harlem	\$10 00
Best display of dried fruits, not less than five varieties	R. F. Cunningham	South Harlem	\$50 00
Second best	T. J. Mellen	Beaumont	\$30 00
Third best	C. P. Barrows Fruit Co.	San Bernardino	Dip. 400

DIVISION I.

Exhibit.	Exhibitor.	Address.	Award.
HONEY.			
Display of honey, in comb and extracted	Mrs. E. B. Morris	Redlands	Dip. 400

DIVISION L.

Exhibit.	Exhibitor.	Address.	Award.
LADIES' WORK—EMBROIDERY.			
Embroidery	Mrs. A. Lawrence	San Bernardino	\$5 00
Knitting	Mrs. Chas. Hidden	East Highlands	\$5 00
Crochet	Mrs. A. S. Lord	San Bernardino	\$5 00
Fancy work (crochet)	Mrs. J. A. McDonald	San Bernardino	\$5 00

DIVISION M.

Exhibit.	Exhibitor.	Address.	Award.
MINERALS.			
Cabinet of minerals	Mrs. J. A. Bidwell	San Bernardino	\$5 00
Cabinet of minerals from mines now being worked	J. A. Bidwell	San Bernardino	\$5 00

BABY SHOW.

Exhibit.	Exhibitor.	Address.	Award.
I—TWIN UNDER TWO YEARS OF AGE.			
and Bessie	Mr. and Mrs. Jas. Mack	San Bernardino	\$25 00
and Fulton	Mr. and Mrs. R. W. Payne	Colton	\$10 00
and Lamont	Mr. and Mrs. J. A. Simms	Riverside	\$15 00
II—HANDSOMEST BABY TWO YEARS OF AGE.			
	Mr. and Mrs. E. T. Baughn	San Bernardino	\$50 00
III—BEST BABY UNDER TWO YEARS OF AGE.			
Waters	Mr. and Mrs. Byron Waters	San Bernardino	\$25 00
IV—SMALLEST BABY BORN IN THE COUNTY.			
nine months; weight, ten pounds	Mr. and Mrs. D. L. Harris	San Bernardino	\$10 00
V—NEATEST AND BEST DRESSED BABY.			
	Mr. and Mrs. J. C. Estes	Riverside	\$10 00
VI—BEST TWINS BETWEEN TWO AND FOUR YEARS OF AGE.			
and Willie	Mr. and Mrs. S. P. Merritt	San Bernardino	\$10 00

TRANSACTIONS

OF THE

TWENTY-NINTH DISTRICT AGRICULTURAL ASSOCIATION

For the Year 1890,

Composed of the Counties of Tuolumne and Calaveras.

REPORT.

SONORA, November 14, 1890.

OFFICERS OF THE ASSOCIATION.

JOHN H. SHINE.....	President
WILLIAM G. JONES	Secretary.
THOMAS A. HENDER	Treasurer.

DIRECTORS.

J. H. SHINE	Sonora
C. S. FITCH.....	Sonora
D. W. BERGER	Sonora
T. C. BIRNEY.....	Columbia
JAMES A. GOODWIN.....	Chinese Camp
L. C. HONEY.....	Copperopolis
ADAM KEILBAR	Murphy
OTTO DOLLING	Angel's Camp

to the honorable the State Board of Agriculture:

GENTLEMEN: The Directors of the Twenty-ninth District Agricultural Association submit this, their report of the transactions of said association for the year ending this date.

WILLIAM G. JONES,
Secretary.

RECEIPTS AND EXPENDITURES.

Receipts.

for privilege	\$15 00
for cream privilege	10 00
for receipts at Pavilion	1,419 00
State aid	2,000 00
	<u>\$3,444 00</u>

Expenditures.

printing and advertising	\$78 75
music	200 00
hay and straw	35 80
lumber	43 07
secretary's salary	100 00
treasurer's salary	50 00
labor at Pavilion	196 25
condiments	28 20
premiums	1,921 00
livery and hack hire	79 00
balance	711 93
	<u>\$3,444 00</u>

PREMIUMS AWARDED—1890.

FIRST DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Tom Corwin, stallion, four years old and over.	Chas. Desler	Jacksonville	1st prem.
Nameless, stallion, four years old and over.	J. D. Williams	Confidence	2d prem.
McCracken, blooded stallion.	G. F. Grant	Columbia	1st prem.
May, mare, three years old.	H. McCrady	Sonora	1st prem.
Daisy, mare, three years old and over.	J. W. Majors	Sonora	1st prem.
Maggie, mare, three years old and over.	H. Batten	Sonora	2d prem.
Beck, mare, two years old.	F. Morse	Tuttlestown	1st prem.
Lottery, mare, two years old.	Mobley	Telegraph City	2d prem.
Nellie, mare, four years old and over.	Chas. Desler	Jacksonville	1st prem.
Eliza, filly.	A. Vincent	Tuttlestown	1st prem.
Prince, suckling colt.	H. Gairy	Sonora	1st prem.
CLASS II.			
Duke, stallion, with three colts.	H. Gairy	Sonora	1st prem.
CLASS III.			
Sampson, stallion, four years old.	McCormick Bros.	Sonora	1st prem.
Duke, stallion, four years old.	H. Gairy	Sonora	2d prem.
Monte, stallion, two years old.	J. C. McTarnahan	Sonora	1st prem.
Norman stallion, one year old.	W. Hosking	Jamestown	1st prem.
Kitty, mare, two years old.	W. Hosking	Jamestown	1st prem.
CLASS IV.			
Span of carriage horses.	Jos. Lord	Sonora	1st prem.
Maggie, single buggy horse.	H. Batten	Sonora	1st prem.
Rowdy, saddle horse.	G. F. Blackwell	Jamestown	1st prem.
Billy, vaquero horse.	Jos. Lord	Sonora	1st prem.
Major, vaquero horse.	Geo. Sandivol	Sonora	2d prem.
CLASS V.			
Sam, jack.	J. B. Satimore	Sonora	1st prem.
Lummix, jenny.	F. Dambacher	Sonora	1st prem.
CLASS VI—CATTLE.			
Dixie, Jersey bull, two years old.	W. J. Barron	Soulsbyville	1st prem.
Louisa, Jersey cow, three years old.	Rev. P. Guerin	Sonora	1st prem.
Stellina, Jersey calf, one year old.	Mrs. E. A. Rodgers	Sonora	1st prem.
CLASS VII.			
Geese.	O. Neubaumer	Springfield	1st prem.
Trio of Leghorns.	F. Dambacher	Sonora	1st prem.
Trio of Plymouth Rocks.	F. Dambacher	Sonora	1st prem.
Trio of Cochins-Chinas.	Frank Flowers	Sonora	1st prem.
Trio of Bantams.	A. J. Elsbree	Sonora	1st prem.

SECOND DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
hose truck	G. W. Hale	Sonora	\$13
hose wagon	H. Mellynn	Sonora	\$13
hose carriage	H. Mellynn	Sonora	\$13
hose harness	M. Burrell	Copperopolis	\$5
hose harness	C. A. Wetmore	Sonora	\$5
hose carriage harness	C. A. Wetmore	Sonora	\$7
hose carriage harness	C. A. Wetmore	Sonora	\$5
hose man's saddle	C. A. Wetmore	Sonora	\$3
hose man's saddle	C. A. Wetmore	Sonora	\$2
CLASS II.			
hose cans	William Rother	Sonora	\$2
hose of blacksmith work	F. F. Ball	Sonora	\$7
hose made hammers	William Strong	Sonora	\$7
hose of dental work	H. Menendez	Sonora	\$10
hose of dental work	W. W. Eastman	Sonora	\$8
hose of dental tools	H. Menendez	Sonora	\$8
hose of dental tools	W. W. Eastman	Sonora	\$6
hose of cabinet work	C. S. Fitch	Sonora	\$10
hose of cabinet work	Joseph Booker	Soulsbyville	\$7
hose of cabinet work	A. Richie	Sonora	\$5
hose of cabinet work	L. Blanding	Sonora	\$3
hose of cabinet work	L. Blanding	Sonora	\$3
hose of cabinet work	J. A. Thomas	Soulsbyville	\$5
hose of cabinet work	Otto Kanig	Sonora	\$10

THIRD DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
embroidery	Miss A. Bemiss	Sonora	\$5
embroidery	Mrs. W. G. Jones	Sonora	\$4
embroidery	Mrs. Dr. Gould	Sonora	\$5
embroidery	Mrs. W. G. Jones	Sonora	\$3
embroidery	Mrs. C. Schultz	Sonora	\$5
embroidery	Mary Baccigaluppi	Sonora	\$5
embroidery	Miss A. Bemiss	Sonora	\$5
embroidery	Mrs. Schultz	Sonora	\$5
embroidery	Mrs. Schultz	Sonora	\$5
embroidery	Mrs. Cabezutt	Sonora	\$3
embroidery	Mrs. J. Wainright	Sonora	\$4
embroidery	Miss L. Israel	Sonora	\$5
embroidery	Mrs. M. J. Wolfing	Sonora	\$4
embroidery	Miss M. Riordan	Sonora	\$6
embroidery	Miss A. Bemiss	Sonora	\$5
embroidery	Mrs. B. Sears	Sonora	\$5
embroidery	Mrs. D. Berger	Sonora	\$5
embroidery	Mrs. O. Kanig	Sonora	\$5
embroidery	Miss Cabezutt	Sonora	\$4
embroidery	Miss M. Riordan	Sonora	\$4
embroidery	Mrs. P. Keeffe	Sonora	\$4
embroidery	Mrs. P. Keeffe	Sonora	\$2
embroidery	Mrs. Neubaumer	Springfield	\$2
embroidery	Mrs. P. Keeffe	Sonora	\$2
embroidery	Miss Bemiss	Sonora	\$5
embroidery	Mrs. D. Berger	Sonora	\$4
embroidery	Mrs. E. Schultz	Sonora	\$3
embroidery	Mrs. P. Burke	Sonora	\$5
embroidery	Mrs. Schultz	Sonora	\$3
embroidery	Mrs. B. Sears	Sonora	\$8
embroidery	Mrs. B. Sears	Sonora	\$8
embroidery	Mrs. W. G. Jones	Sonora	\$3
embroidery	Miss L. Harriman	Sonora	\$6

THIRD DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Child's afghan	Miss A. Bemiss	Sonora	\$4 00
Hearth rug	Miss S. E. Grant	Jamestown	\$3 00
Door mat made of rags	Mrs. G. Wing	Columbia	\$4 00
Crochet shawl	Miss L. Israel	Sonora	\$4 00
Crochet bedspread	Miss L. Cazzaretto	Sonora	\$4 00
Knit bedspread	Mrs. W. L. Howes	Sonora	\$4 00
Patchwork quilt	Mrs. James May	Sonora	\$4 00
Knit cotton stockings	Miss L. A. Berger	Sonora	\$4 00
Knit woolen stockings	Miss J. Patterson	Sonora	\$4 00
Largest meritorious display of fancy work	Mrs. Josie Keffe	Sonora	\$10 00
Display of fancy work	Miss Cabezzutt	Sonora	\$10 00
Calico dress for miss	Miss S. Laughrey	Sonora	\$4 00
Knitted cape	Miss Wight	Sonora	\$4 00
Charmstring	Mrs. E. Lander	Sonora	\$3 00
Crochet work	Miss N. Kingsberry	Sonora	\$3 00
Collection of birds	Mrs. Ida Dambacher	Sonora	\$3 00
Display of millinery	B. and H. Baer	Sonora	\$4 00
Lap robe	Eugene Reyland	Sonora	\$4 00
CLASS II—JUVENILE.			
Silk embroidery	Miss C. Inch	Sonora	\$4 00
Card album	Eddie Burden	Sonora	\$5 00
Worsted flowers	Rosa Ventra	Sonora	\$2 00
Shell work	E. L. Neubaumer	Springfield	\$3 00
Pincushion	Louis Wilzinsky	Sonora	\$3 00
Table cover	Mary Baccigaluppi	Sonora	\$5 00
Toilet set	Daisy Baer	Sonora	\$5 00
Outline splasher	M. Sugg	Sonora	\$5 00
Embroidered alphabet	Flora Reeder	Sonora	\$4 00
Patchwork quilt	Irene Shipe	Soulsbyville	\$5 00
Best crochet bedspread	Juliet Mouron	Sonora	\$4 00
CLASS III.			
Exhibit of dry goods	E. Wilzinsky & Son	Sonora	\$22 00
Exhibit of woolen blankets	E. Wilzinsky & Son	Sonora	\$7 00
Exhibit of boots and shoes	E. Wilzinsky & Son	Sonora	\$10 00
Harness and saddlery	O. A. Wetmore	Sonora	\$10 00
Exhibit of groceries	James May	Sonora	\$13 00
Hand-made soap	Miss H. Berger	Sonora	\$7 00
Soft soap	Mrs. Voorhies	Columbia	\$7 00
Silverware and jewelry	E. Osborne	Sonora	\$10 00
Table and pocket cutlery	E. Osborne	Sonora	\$5 00
Exhibit of furniture	Charles Burden	Sonora	\$20 00
Hair mattress	Charles Burden	Sonora	\$5 00
Exhibit of upholstery	Charles Burden	Sonora	\$20 00
Exhibit of cabinet wares	Charles Burden	Sonora	\$4 00
Lard	Miss H. Berger	Sonora	\$12 00
Pumps, stoves, and tinware	William Rother	Sonora	\$12 00
Exhibit of machinery	John Romans	Sonora	\$5 00
Patent quartz drill	John Romans	Sonora	\$5 00
Display of cigars (white labor)	A. S. Fass & Bro.	Sonora	\$12 00
Taxidermy work	E. Osborne	Sonora	\$2 00
Home-made confectioneries	Mrs. Lick	Sonora	\$10 00
Specimen of native marble	G. F. Grant	Columbia	\$10 00
Single specimen of marble	H. McCrady	Sonora	\$10 00
Specimen of carriage painting	William Hartvig	Sonora	\$20 00
Specimen of sign painting	William Hartvig	Sonora	\$5 00
Hand-made soft soap	Mrs. E. Wilzinsky	Sonora	\$7 00

FOURTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Potatoes	W. H. Booker	Sonora	\$4 00
Wheat	Joseph Nors	Sonora	\$5 00
Plant, in bloom	Joseph Nors	Sonora	\$10 00
Wheat, one half bushel	Joseph Shipe	Sonora	\$5 00
Wheat, one half bushel	W. H. Booker	Sonora	\$3 00
Wheat, one half bushel	Henry Echel	Columbia	\$5 00
Wheat, one half bushel	T. S. Reuter	Sonora	\$3 00
Wheat, one half bushel	T. S. Reuter	Sonora	\$5 00
Wheat, home production	T. S. Reuter	Sonora	\$1 00
Wheat, largest pumpkin	Smith & Chamberlain	Sonora	\$10 00
Wheat, flour, Sonora Mills	Smith & Chamberlain	Sonora	\$10 00
Wheat, feed, flour, etc.	S. F. Ball	Soulsbyville	\$2 50
Wheat, barley, on stalk	W. S. Stone	Sonora	\$2 00
Wheat, beans	J. Pereira	Jamestown	\$5 00
Wheat, corn, on stalk	J. Meyers	Sonora	\$3 00
Wheat, corn, on stalk	Joe Barron	Soulsbyville	\$5 00
Wheat, potatoes	E. M. Whitsell	Sonora	\$4 00
Wheat, potatoes	E. Carne	Soulsbyville	\$5 00
Wheat, potatoes	O. Neubaumer	Springfield	\$2 00
Wheat, potatoes	E. Carne	Soulsbyville	\$2 00
Wheat, potatoes	E. Carne	Soulsbyville	\$1 00
Wheat, potatoes	D. Cenelli	Jamestown	\$4 00
Wheat, potatoes	D. Cenelli	Jamestown	\$2 00
Wheat, potatoes	Rocco & Dondero	Columbia	\$1 50
Wheat, potatoes	I. T. Holland	Soulsbyville	\$10 00
Wheat, potatoes	J. F. Ralph	Sonora	\$4 00
Wheat, potatoes	T. Neubaumer	Springfield	\$4 00
Wheat, potatoes	Rocco & Dondero	Columbia	\$3 00
Wheat, potatoes	U. J. Elsbee	Sonora	\$3 00
Wheat, potatoes	Rocco & Dondero	Columbia	\$2 00
Wheat, potatoes	Rocco & Dondero	Columbia	\$3 00
Wheat, potatoes	Phil. Cavallero	Sonora	\$2 00
Wheat, potatoes	R. H. Finney	Sonora	\$2 50
Wheat, potatoes	H. Batten	Sonora	\$12 50
Wheat, potatoes	E. Carne	Soulsbyville	\$5 00
Wheat, potatoes	J. Meyers	Sonora	\$4 00
Wheat, potatoes	Mrs. Fitch	Sonora	\$10 00
Wheat, potatoes	Belle Kalloch	Sonora	\$3 00
Wheat, potatoes	Mrs. M. Parker	Sonora	\$5 00
Wheat, potatoes	Peter Costa	Sonora	\$2 50
Wheat, potatoes	T. Neubaumer	Springfield	\$2 00
Wheat, potatoes	Jacob Ultschi	Soulsbyville	\$10 00
Wheat, potatoes	Mrs. Volponi	Jamestown	\$10 00
Wheat, potatoes	Mrs. J. Barron	Soulsbyville	\$5 00
Wheat, potatoes	Mrs. R. Guy	Soulsbyville	\$10 00
Wheat, potatoes	M. J. Wolfing	Sonora	\$5 00
Wheat, potatoes	M. J. Wolfing	Sonora	\$5 00
Wheat, potatoes	H. Batten	Sonora	\$2 50
Wheat, potatoes	McCormick Bros.	Sonora	\$7 50
Wheat, potatoes	A. Siebert	Columbia	\$3 00
Wheat, potatoes	Mrs. McMillen	Sonora	\$2 00
Wheat, potatoes	Leon Cholly	Sonora	\$2 00
Wheat, potatoes	Mrs. Waller	Jamestown	\$5 00
Wheat, potatoes	Leon Cholly	Sonora	\$2 50
Wheat, potatoes	Mrs. H. Burden	Sonora	\$2 00
Wheat, potatoes	A. Siebert	Columbia	\$2 00
Wheat, potatoes	A. Siebert	Columbia	\$1 00
Wheat, potatoes	A. Siebert	Columbia	\$2 00
Wheat, potatoes	Hattie Berger	Sonora	\$2 00
Wheat, potatoes	Mrs. H. Burden	Sonora	\$1 50
Wheat, potatoes	A. Siebert	Columbia	\$3 00
Wheat, potatoes	Mrs. A. S. Fass	Sonora	\$2 00
Wheat, potatoes	W. G. Rudorf	Sonora	\$2 00

FIFTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Display of apples	Wm. Calder	Sonora	\$10 00
Display of apples	J. B. Carter	Confidence	25 00
Display of apples	J. Ultschi	Soulsbyville	25 00
Display of apples	J. A. Goodwin	Chinese Camp	25 00
Display of apples	D. Restano	Sonora	25 00
Display of peaches	J. A. Goodwin	Chinese Camp	\$10 00
Display of peaches	Wm. Harris	Sonora	25 00
Display of peaches	H. Batten	Sonora	25 00
Display of peaches	J. Rosasco	Sonora	25 00
Display of rice (growing)	J. Pereira	Jamestown	25 00
Plums	H. Oppenheimer	Sonora	\$10 00
Olives	Wm. Ricketts	Sonora	25 00
Oranges	J. Reynaud	Chinese Camp	25 00
Oranges	J. A. Goodwin	Chinese Camp	25 00
Variety of grapes	J. A. Goodwin	Chinese Camp	\$10 00
Variety of grapes	J. Wainright	Sonora	25 00
Variety of grapes	Rocco & Dondero	Columbia	25 00
Exhibit of grapes (single variety)	J. A. Goodwin	Chinese Camp	25 00
Variety of wine grapes	J. A. Goodwin	Chinese Camp	25 00
Variety of wine grapes	J. Wainright	Sonora	25 00
Variety of wine grapes	T. S. Reuter	Sonora	25 00
Strawberries	John Pereira	Jamestown	25 00
Blackberries	Jos. Nors	Sonora	25 00
Raspberries	J. Ralph	Sonora	25 00
Dried apples	Mrs. Neubeaumer	Springfield	25 00
Dried apples	W. H. Booker	Sonora	25 00
Dried pears	Wm. Gillis	Tuttletown	25 00
Dried pears	Mrs. Neubeaumer	Springfield	25 00
Dried peaches	William Gillis	Tuttletown	25 00
Dried peaches	Mrs. Waller	Jamestown	25 00
Dried plums	Jos. Nors	Sonora	25 00
Dried nectarines	W. H. Booker	Sonora	25 00
Dried nectarines	Wm. Gillis	Tuttletown	25 00
Dried figs	Mrs. Dr. Drake	Sonora	25 00
Dried figs	William Gillis	Tuttletown	25 00
Raisins	H. Quinn	Chinese Camp	25 00
Raisins	William Harris	Sonora	25 00
Display of dried fruit	J. Wainright	Sonora	25 00
English walnuts	J. Wainright	Sonora	25 00
Soft-shell almonds	J. Wainright	Sonora	25 00
Exhibit of chestnuts	J. Pereira	Jamestown	25 00
Exhibit of black walnuts	R. Marshall	Sonora	25 00
Spanish peppers	Mrs. V. Gallutt	Sonora	25 00
Exhibit of honey	William Swerer	Tuttletown	25 00
Preserves	Mrs. R. Guy	Soulsbyville	25 00
Pickles	Macomber Bros.	Sonora	25 00
Display of twelve jars jellies	Mrs. R. Guy	Soulsbyville	25 00
Display of hermetically sealed fruit	Mrs. R. Guy	Soulsbyville	\$10 00
Six jars gooseberries	S. F. Jefferds	Sonora	Sp. men.
Brandied peaches	J. Garaventa	Sonora	Sp. men.
Brandied peaches	H. Oppenheimer	Sonora	Sp. men.
Assorted fruit in glass	S. Moore	Sonora	Sp. men.
Display of pickles	Miss H. Berger	Sonora	25 00
Preserved fruit (new process)	Joseph Nors	Sonora	25 00
Exhibit of brandies and wines	J. Pereira	Jamestown	25 00
Exhibit of grape brandy	J. Pereira	Jamestown	25 00
Exhibit of brandy, one year old	J. Pereira	Jamestown	25 00
White wine	James A. Goodwin	Chinese Camp	25 00
Exhibit of claret, over one year old	Macomber Bros.	Sonora	25 00
Exhibit of port wine	J. Pereira	Jamestown	25 00
Exhibit of sherry wine	J. Pereira	Jamestown	25 00
Exhibit of ale	J. Banman	Sonora	25 00
Exhibit of porter	J. Banman	Sonora	25 00
Exhibit of beer	J. Banman	Sonora	25 00
Exhibit of soda water	Thomas Leonard	Sonora	25 00
Exhibit of sarsaparilla and iron	Thomas Leonard	Sonora	25 00
Exhibit of ginger ale	Thomas Leonard	Sonora	25 00

FIFTH DEPARTMENT—Continued.

Exhibit.	Exhibitor.	Address.	Award.
Display of orange cider	Thomas Leonard	Sonora	\$5 00
Display of champagne cider	Macomber Bros.	Sonora	\$10 00
Display of apple cider vinegar	Joseph Shipe	Sonora	\$5 00

SIXTH DEPARTMENT.

Exhibit.	Exhibitor.	Address.	Award.
CLASS I.			
Painting	Ben Sears	Sonora	\$10 00
Painting	Ben Sears	Sonora	\$6 00
Painting	Miss F. Arnold	Columbia	\$10 00
Painting	Miss Morgan	Columbia	\$6 00
Painting on bolting cloth	Mrs. Keefe	Sonora	\$5 00
Painting on china	Mrs. Keefe	Sonora	\$5 00
Painting on china	Miss F. Arnold	Columbia	\$5 00
Photographic views of district	T. W. Wells	Sonora	\$10 00
Photographic views of district	T. W. Wells	Sonora	\$10 00
Photographic views of district	Col'bia Cornet Band	Columbia	\$50 00
Photographic views of district	F. Conrad	Sonora	\$20 00
Photographic views of district	J. A. Goodwin	Chinese Camp	\$5 00
Photographic views of district	J. H. Shine	Sonora	\$20 00
Photographic views of district	W. E. Beckwith	Sonora	\$5 00
Photographic views of district	Mrs. Hosking	Sonora	\$7 50
CLASS II—JUVENILE.			
Painting (copy)	Irene Hall	Sonora	\$2 00
Painting (copy)	Irene Hall	Sonora	\$2 00
Painting (copy)	Irene Hall	Sonora	\$5 00

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ANNUAL REPORT

OF THE

Board of State Viticultural Commissioner.

FOR 1891-92.

APPENDICES A, B, C, D, AND E (APPENDIX A BOUND SEPARATELY.)



SACRAMENTO:

STATE OFFICE, : : : : A. J. JOHNSTON, SUPT. STATE PRINTING.

1892.

OFFICERS AND MEMBERS OF THE BOARD.

GEORGE WEST, President.....	Stockton
Commissioner for the San Joaquin District.	
CHARLES BUNDSCHU, Vice-President.....	San Francisco
Commissioner for the San Francisco District.	
ALLEN TOWLE, Treasurer.....	Towler
Commissioner for the El Dorado District.	
J. DEBARTH SHORB.....	San Gabriel
Commissioner for the State at Large.	
JOHN T. DOYLE.....	San Francisco
Commissioner for the State at Large.	
ISAAC DETURK.....	Santa Rosa
Commissioner for the Sonoma District.	
E. C. PRIBER.....	Napa
Commissioner for the Napa District.	
R. D. STEPHENS.....	Sacramento
Commissioner for the Sacramento District.	
E. C. BICHOWSKY.....	San Gabriel
Commissioner for the Los Angeles District.	
WINFIELD SCOTT, Secretary.....	San Francisco
CLARENCE J. WETMORE, Chief Executive Viticultural and Health Officer.....	Livermore and San Francisco

Office of the Board:
317 PINE STREET, SAN FRANCISCO.

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REPORT OF GEORGE WEST,

President of the Board of State Viticultural Commissioners, 1892-93.

STOCKTON, CAL., August 1, 1892.

His Excellency H. H. MARKHAM, Governor of the State of California

Sir: I herewith transmit the financial report of the Board of State Viticultural Commissioners, showing the receipts and disbursements of the Board during the forty-second and forty-third fiscal years; also the report of Hon. J. DeBarth Shorb, as President of the Board for the forty-third year.

You will find following the financial statement, furnished by Clarence Wetmore.

Respectfully submitted.

GEORGE WEST,

President of the Board of State Viticultural Commissioners.

Board of State Viticultural Commissioners:

GENTLEMEN: I respectfully submit the following report of receipts and disbursements for the forty-second fiscal year, ending June 30, 1891, as taken from the books in the

RECEIPTS.

Amount appropriated by the Legislature for the forty-first and forty-second fiscal years, from July 1, 1889, to July 1, 1891.....	\$35,000 00
Amount expended forty-first fiscal year as per report rendered..	17,479 77
Amount available for forty-second fiscal year.....	\$17,520 23

DISBURSEMENTS.

Salaries.....	\$3,000 00
Expenses, including salaries of employes, and rent.....	10,761 50
Experimental work.....	1,021 60
Printing.....	2,050 00
Travelling expenses of Commissioners.....	39 20
Advertising foreign markets.....	200 00
Postage.....	102 90
Analyst.....	117 00
Obtaining information.....	75 00
Stationery.....	71 70
Repairs.....	61 25
Balance unexpended.....	\$17,500 11
Amount expended.....	\$20 00

The receipts and disbursements for the forty-third fiscal year were as follows:

RECEIPTS.

Amount appropriated by Legislature for the forty-third and forty-fourth fiscal years, from July 1, 1891, to July 1, 1893.....	\$30,000 00
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REPORT OF STATE VITICULTURAL COMMISSIONERS.

DISBURSEMENTS.

Salaries	\$3,000 00
Office expenses, including salaries of employes, rent, etc.	7,363 15
Traveling expenses Chief Executive Officer	386 40
Library	172 35
State Analyst	700 00
Experimental work	141 60
Reports	638 50
Investigations	100 00
Convention	176 40
Traveling expenses of Commissioners	75 20
	<hr/> \$12,733 00

Amount available for the forty-fourth fiscal year

C. J. WETMORE,
Chief Executive Officer.

REPORT OF J. DE BARTH SHORB.

REPORT OF J. DE BARTH SHORB,

President of the Board of State Viticultural Commissioners, 1891-92.

His Excellency H. H. MARKHAM, Governor of the State of California
I herewith submit to you my annual report as President of the
Board of State Viticultural Commissioners for the year ending June 30
1892, together with the reports of District Commissioners and others
concerning the work of the Commissioners to the above date, when I retire
from the presidency of the Board.

There have been a few changes in the personnel of the Board during
the past year. In December, 1891, Hon. George G. Blanchard, the Com-
missioner for the El Dorado District, died, after a very short illness.
Mr. Blanchard had been associated with the Board from its inception
and his services with us, as in all walks of life, were distinguished and
valuable. The seat made vacant by his death was not occupied until
April, when Mr. Allen Towle, of Towles, was appointed to the Commis-

The term of Hon. L. J. Rose, as Commissioner for the Los Angeles
District, expired by limitation in April. Mr. Rose is no longer active
engaged in viticulture, and requested that the position be given to one
who was, and who could give more attention to the duties of the office.
His place was filled by the appointment of Mr. E. C. Bichowsky, of I
Rose & Co. (limited), one of the young and active viticulturists of
the Los Angeles District, and in every way a desirable addition to the
Board.

The terms of George West, as Commissioner for the San Joaquin Dis-
trict, and John T. Doyle, as Commissioner for the State at Large, expire
in April. These gentlemen, who have had a long and honorable service
on the Board, were reappointed.

There have been several changes in the officers of the Board. At the
annual meeting in June, 1891, I was elected President, in place of Mr.
DeTurk, who declined reelection, and Mr. George West was elected
President, in my place. At the annual meeting in June, 1892,
I declined a reelection, on account of ill-health, and Mr. George West was
chosen to succeed me, Mr. Charles Bundschu being elected Vice-Pres-
ident. At the same time Mr. John T. Doyle declined reelection as Treas-
urer, and Mr. Allen Towle was elected in his stead.

The office of the Secretary has not been changed, Mr. Winfield Scott
holding the position. Mr. Charles A. Wetmore declined reelection
as Chief Executive Officer at the June meeting in 1891, and Mr. Clay
J. Wetmore was chosen in his place.

THE VITICULTURAL SITUATION.

The wine industry is in a most peculiar situation, and it would seem
that there must be some improvement in the near future. All of the
wards set out in that great planting era of 1880 to 1885 are i

bearing, and there are practically no new vineyards to come into bearing. This means that the annual yield of wine and brandy in the State cannot be materially increased for at least five years—that is, until new vineyards can be planted and brought into bearing. I do not think that the annual yield for the next five years will exceed 18,000,000 gallons of wine and 1,250,000 gallons of brandy.

To consume this we have a present Eastern and foreign demand for 12,000,000 gallons of wine and 800,000 gallons of brandy, and a home consumption of wine of 6,000,000 to 8,000,000 gallons, and of brandy about 300,000 gallons.

This, then, is the situation: Our markets for wine and brandy are requiring steadily increasing quantities, and are in a fair condition. We have no means of increasing our production within a reasonably short time. How the reaction for the better can be long delayed is difficult to conceive.

The raisin business is not in a satisfactory condition. Several years of unexampled prosperity on the part of those who owned bearing Muscat vineyards seems to have turned the heads of intending investors, and for three or four years past the planting of raisin-grape vineyards ran riot, particularly in the San Joaquin Valley. In February, 1891, Mr. George West, the Commissioner for the San Joaquin District, published a report on the raisin industry, in which he deprecated further planting, and showed where the business was drifting to. His report at that time was received with bitter denunciations, but time, I think, has demonstrated the wisdom of what he said. Many thousands of poor people were deterred from investing their all in the industry, and were saved from what appeared certain loss. It is estimated that his report prevented the planting of at least 20,000 acres of Muscats in the winter of 1891-92. His report, to which I invite special attention, is printed elsewhere.

The raisin producers, already threatened with overproduction, though tens of thousands of acres of Muscats, etc., are not in bearing, are holding mass meetings to devise ways and means to keep up prices. What the outcome will be when all the young vineyards come into bearing, time only can tell.

The table grape business is in a very satisfactory condition, and no complaints are to be heard from the leading shippers.

WORK OF THE COMMISSION.

Much of the work of the Commission in the past two years has been directed towards finding a market for California wines and brandies. To this end the Viticultural Exhibit and Café has been maintained with considerable success. The results of this branch of the Commission's work cannot be judged by the amount of wine actually sold, but by the effect on the course of trade in California, and on Eastern buyers who have visited the place.

I am free to state that in San Francisco the objects of the café have been attained. A few years ago when the café was first opened, there were no hotels or restaurants in San Francisco and comparatively few private houses, in which recognized brands of California wine or brandy could be had. The leading grocers would not recognize or sell brandy, nor could any reasonable inducement be held out to them to do so. As

the hotels and restaurants, all that any of them would do was to sell all red wines as "California Zinfandel," and all white wines as "California White Wine."

Now, however, matters have changed. Through the influence of the brands are everywhere recognized. It was a difficult matter to get the large grocers, the hotels, and particularly the French restaurateurs to this, but they have been compelled by the demands of their customers to recognize brands. Following this, private brands have found their way largely into families.

I am of the opinion that the establishment of similar cafés and exhibits under State control in Chicago and New York would be of immense value to the viticultural industry. In both places there is large demand for California wines and brandies, but the makers and shippers are retarded by the evil of foreign labels and high prices on superior cheap domestic products. These large markets are in exactly the same condition as was the San Francisco market five years ago, and I am sure that similar methods would bring about similar and equally valuable results. The manner of the management of the café was well described by my predecessor, I. DeTurk, and it is needless for me to go into details on this point.

The operations of the café and disposition of the wines sent to the exhibit by exhibitors in the two years ending June 30, 1892, are shown in the following statement:

REPORT OF CAFÉ.

From July 1, 1890, to June 30, 1892.

RECEIPTS.		
Wine on hand July 1, 1890.....	4,992	
Wine received July 1 to December 31.....	8,694	
Wine received 12 months, 1891.....	15,570	
Wine received 6 months to June 30, 1892.....	5,454	34,7
DISPOSITION.		
Wine sold.....	16,700	
Wine returned.....	6,820	
Wine broken, bad order, samples.....	1,278	
Wine used by owner.....	2,187	
Wine placed on exhibit.....	213	
Wine on hand June 30, 1892.....	7,512	34,7
FINANCIAL.		
Cash received.....	\$8,641	
Amount to corkage and to café.....	\$1,713 30	
Amount to reserve fund.....	480 85	
Amount paid exhibitors.....	6,447 35	\$8,641
Amount empty bottles, cases, etc.—amount placed in reserve fund.....	\$302	

The establishment of cafés in New York and Chicago, I need not say, would be warmly welcomed by California producers. It is true the establishment of one in Chicago which proved a disappointment, but that does not affect the soundness of the idea. This café was supported wholly by private enterprise, and mismanagement was responsible for its failure. Competent hands such cafés should prove successful and be a great benefit to the industry.

PUBLICATIONS AND INVESTIGATIONS.

It must not be supposed, however, that the sole work of the Commission has been to maintain the café. The outside investigations have been of equal if not greater importance.

The investigation into the cause and remedy for the so-called Anaheim disease has ceased. I am of the opinion that this disease has about run its course in Southern California, after having destroyed, in round numbers, from fifteen thousand to eighteen thousand acres of vines. Its origin, its nature, and its cure are still unknown and as mysterious as the day the disease was first noticed. Some of the vineyardists of Orange County and elsewhere, whose vineyards were wiped out by the malady, have begun planting experimental plots to ascertain whether the conditions are still favorable for its development. On this matter I have prepared a special report, being one of the "Special Committee on Anaheim Disease" of the Board.

Under the direction of Chief Executive Officer C. J. Wetmore, Mr. William C. Spencer has conducted a series of experiments to test the effect of alternating electrical currents on wine and brandy. The samples treated and untreated are now in the experimental cellar of the Commission, for examination by those interested.

During the past two years considerable attention has been given to the production of cream of tartar in California. One extensive factory has been located at Napa, for the utilization of pomace, under the California Cream of Tartar Co., and has met with fair success. Other gentlemen have signified their intention of engaging in this new industry, notably Mr. George West, of Stockton, Mr. John H. Wheeler, of St. Helena, and Capt. J. Chamon de St. Hubert, of Fresno. In order to obtain the latest and best information on the manufacture of this important viticultural by-product, this Commission has had Prof. W. B. Rising, of Berkeley, under engagement for many months investigating the subject. His two reports on the matter are published in this report. We have also had translated a work entitled "The Utilization of Wine Residues," by Antonio dal Piaz, which treats of the same subject, among others. This translation will be found as an appendix to this report.

The Directory of the Grape Growers and Wine Makers of California and of the Eastern States, undertaken some time ago, has been completed and published. It is by far the most complete and valuable book on the subject yet issued. It shows that in 1890 there were 168,366 acres of vines in California, of which 122,168½ acres were in bearing and 46,197½ acres not bearing. Of the total acreage, 90,228 acres were in wine grapes, 9,300½ in table grapes, and 68,837½ acres in raisin grapes. This represents to-day practically all the vineyards in the State, except the raisin-grape vineyards. I should estimate that there are to-day about 100,000 acres of Muscat, Seedless Sultana, and Malaga vines in California, and that the total acreage in vines in the State is about 200,000. Our directory is practically correct to-day as far as concerns the acreage of wine and table grapes, but I would recommend that after the planting of this season is over another census be taken in the principal raisin-grape-producing counties, in order to ascertain where the raisin business is drifting.

The Board has also compiled and published a most complete and valuable work on the distillation of brandy, supplementing it with a trans-

lation of Antonio dal Piaz's treatise on cognac manufacture. This work is published as Appendix A to this annual report, and is bound separately. It has proved one of the most valued and appreciated books ever issued by this Commission. The demand for copies of this work has been constant and steady, and already there is a shortage of copies.

Immediately after the passage of the Sweet Wine bill, Mr. Frank West went to Washington to confer with the Commissioner of Internal Revenue in regard to the regulations to govern the administration of the law. While he was in Washington the Board sent him to the principal wine-producing sections of New York and northern Ohio in the interest of the sale of high-proof brandy and concentrated must to the sweet-wine makers. Mr. West has submitted a report on the subject, which will be read with interest.

Mr. Clarence J. Wetmore, the Chief Executive Officer, is now engaged in writing a treatise on the wine-making and grape-crushing appliances peculiar to California, with appropriate illustrations, which will soon be ready for publication.

Mr. Winfield Scott, the Secretary, is at present engaged in translating Valery Mayet's work, "*Les Insectes de la Vigne*," a French work of remarkable thoroughness and value, on the insect pests which attack the vine, and the remedies therefor. This book, too, will be ready for publication in a short time.

VITICULTURAL CONVENTION.

The Eighth Annual Viticultural Convention was held at Irving House, San Francisco, on May 18th and 19th, under the management of the Commission. I was unfortunately detained at my home by reason of illness, and Mr. I. DeTurk acted as Chairman in my place. This convention was almost wholly devoted to the World's Fair, and how to exhibit there, and the work there started has been of great value to the producers and merchants who intend exhibiting. The full proceedings of this convention appear as an appendix to this report.

RESISTANT STOCKS FOR VITICULTURISTS.

There is every indication that an era of planting is about to set in in Sonoma and Sonoma Counties, where the phylloxera has done the most damage, and it seems to me that steps should be taken to insure that proper resistant stock will be on hand when wanted. Last winter the demand for *Riparia* and *Lenoir* cuttings, and especially for rootstock, was so great that it could not be met—even this when there has been so little replanting, comparatively. In this connection I desire to call attention to a suggestion made by Viticultural Commissioner I. DeTurk in his 1890 report. He said:

"The experience with resistant vines in France, where the production is now rapidly increasing, in consequence of the replanting of those vineyards which were destroyed by the phylloxera, should teach us a lesson. It cannot be impressed too strongly upon our growers that the replanting of their diseased vines by *Riparias* is the only true salvation of their vineyards, and it might be advisable for our Board to consider the funds, and the law which appropriates them, would not permit the furnishing of *Riparia* roots to the vine growers. We would also

recommend to use all efforts in inducing the growers to pull out and burn up all diseased vines, the present condition of affected vineyards in this State containing these diseased vines making them hotbeds for the propagation of this plague. Experience has shown that when diseased vines have been pulled out and destroyed, the progress of the phylloxera has been comparatively slow."

The regular nurserymen appear unable to meet the demand for this stock, and I would recommend that a State nursery be created temporarily, from which those growers who wish resistant stock could obtain approved and accepted varieties. In this connection, it affords me pleasure to state that Mr. Clarence J. Wetmore, the Chief Executive Officer, is now working on a report on the adaptability of the different resistant stocks and hybrids used in France to our soils. It seems to me that a careful study of these hybrids should be made. We know little of them in California except from published French works, and some of them may prove of value to us. This could be done in connection with the operations on the proposed State nursery, or elsewhere.

PRODUCTION OF WINE.

The production of wine remains about stationary, and will be so for several years to come. The increase which came from new vineyards coming into bearing has been compensated for by the decrease due to the Anaheim disease, to the destruction of vineyards in Napa and Sonoma Counties by phylloxera, and to the rooting up of vineyards by discouraged growers. The estimated production since 1890, at which time ex-President I. DeTurk closed his report, has been as follows:

1890.....	18,000,000 gallons.
1891.....	20,000,000 gallons.
1892 (estimated).....	10,000,000 gallons.

The estimated decrease in 1892 is due to the frosts which wrought such havoc in Napa and Sonoma Counties; to coulure, not only in those districts, but in Livermore Valley and elsewhere; and to hot weather before the vintage. The price paid for grapes last year ranged from \$10 to \$25 or \$30 per ton, the latter for such grapes as the Cabernets, Petit Pinot, etc.

PRODUCTION OF BRANDY.

Stimulated by the low price of grapes and wine, and by the encouragement offered to shippers to send their brandy to the markets of England and Germany, the distillation of brandy has grown apace, and the brandy business is now one of the most solid and satisfactory branches of the viticultural industry.

The production in California for the fiscal year ending June 30, 1891, was 1,475,525 proof gallons, and for the fiscal year just closed it will undoubtedly be much larger, though definite figures showing the increase are not yet at hand, the Commissioner of Internal Revenue having not yet published the statistics.

The number of distilleries in operation in the State is about two hundred and fifty, and I am informed that a large distilling interest is about to spring up in Fresno, Tulare, and Kern Counties to handle second and third-crop Muscat grapes. What the effect of this will be remains to be

I am of the opinion that the distillers who are embarking in this business should move with great caution. There is undoubtedly a demand, though not a great one, for the peculiarly flavored spirit which Muscat produces, but an overproduction will assuredly prove disastrous.

PRODUCTION OF RAISINS.

It is difficult to closely approximate the production of raisins in California. The annual yield is growing so rapidly, and so much is being packed in sacks, aside from what is sent out in boxes, that it is difficult to estimate the product in the usual unit; i. e., twenty-pound boxes. The most important contribution of the Commission on this subject in the past two years was the report of Commissioner (now President) George West, which provoked more adverse criticism, and at the same time praise, than anything yet issued. When the new census of raisin vineyards of the State is taken—a work which I sincerely hope will be undertaken in the spring—we will be able to speak more definitely of the future prospects of this business.

I estimate the production of raisins, in twenty-pound boxes, in the past two years as follows:

.....	2,040,000 twenty-pound boxes.
.....	2,500,000 twenty-pound boxes.
(estimated).....	3,100,000 twenty-pound boxes.

DRYING WINE GRAPES.

The drying of wine grapes, as a means of disposing of the surplus product in those districts where open-air drying is possible, has not increased, nor is there any reason to believe that it will cease until the price of wine grapes rises to such a figure as to render drying profitable.

Disappointment has met every endeavor to market this product, but this is not to be greatly regretted, as an American market has been developed which gives every evidence of permanency. I am informed by the leading fruit commission houses that the dried wine grapes, and particularly the dried Zinfandel, is becoming a great favorite in certain sections in the East for culinary purposes. The grapes are a valuable substitute for other dried fruit, and make a tart sauce which is obtainable either from ordinary stone fruits, such as plums, prunes, etc., or from raisins.

The extent of drying is well nigh impossible to reach with any degree of accuracy. Certain it is that during the vintage of 1890, and again in 1891, the quantity of grapes so handled was large. Last season (the vintage of 1891) the prices ranged from 2½ to 3 cents per pound, and this season 3½ cents per pound is offered in spite of the promise of a large yield of raisins. These prices enable producers to make a fair return on their investment in vineyards.

THE SWEET WINE BILL.

The long-desired "Sweet Wine Bill," which permits the fortification of sweet wines with brandy without payment of the internal revenue on the spirit used, has at last passed Congress. The law is now in

operation, and in the season of 1891-92 about 2,900,000 gallons of different varieties of sweet wines were made under its provisions. This practically includes all such wines made in the State.

There has been some difference of opinion regarding the regulations under which the law is administered, and particularly over the establishment of the so-called "Sweet Wine Room" in the wineries, in which the fortification of the wine is accomplished. Time can only tell whether this provision is for the best. Many of the sweet wine makers are heartily in favor of it, others are not.

Attempts have been made at the present session of Congress to change the law so as to permit the use of corn spirit for fortification, and to permit the fortification of dry wines.

Both of these propositions, which emanate from one quarter in western New York, have been bitterly and strongly resisted by this Board. The law as it stands is in favor of grape products only in making sweet wines—that is, in favor of purity. This Commission stands committed to the policy that only grape products should go into sweet wines as a matter of health and purity, and believes that no corn spirit should be permitted.

On the other proposition, the fortification of dry wines for domestic consumption free of tax, there can be but one opinion. Should it pass, all wines can be fortified and stretched at will, and there will be but little need of vineyards.

This part of the proposed change of the bill has also been warmly opposed, and the Board is assured by the California Senators and Representatives in Congress that there is little likelihood of either amendment being adopted.

STATISTICAL.

The statistics of the receipts and shipments of wines and brandies have been carefully kept by the Secretary. The movement of wine and brandy since the report of ex-President DeTurk in 1890, will be found appended:

RECEIPTS OF WINE AND BRANDIES AT SAN FRANCISCO FROM THE INTERIOR

Year.	Wine— Gallons.	Brandy— Gallons.
1890.....	11,561,076	540,387
1891.....	12,576,665	712,463

TOTAL WINE SHIPMENTS.

Year.	By Sea—		By Rail—		Total—		Total Value.	Average Price perGallon.
	Cases.	Gallons.	Cases.	Gallons.	Cases.	Gallons.		
1890.....	9,058	4,150,393	*	4,941,689	9,058	9,092,082	\$3,972,482	\$4.35
1891.....	14,289	5,492,850	30,326	5,621,179	44,615	11,114,029	5,001,781	45

* No overland case report.

TOTAL BRANDY SHIPMENTS.

Year.	By Sea—		By Rail—		Total—		Total Value.	Average Price perGallon.
	Cases.	Gallons.	Cases.	Gallons.	Cases.	Gallons.		
1890.....	436	303,257	*	296,840	*436	600,097	\$909,641	\$1
1891.....	414	493,726	1,225	305,886	1,639	799,612	1,217,419	1

* No overland case report.

In view of the rapid growth of the shipments, it is interesting to see in what direction the wine trade is increasing most rapidly. The following tables, showing the distribution of the wine exports by sea, thus be found of value:

TO NEW YORK. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	1,240	3,791,942	\$1,570,4
1891.....	1,862	4,939,737	2,243,0

TO CENTRAL AMERICA. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	4,150	61,165	\$66,5
1891.....	8,607	109,813	133,6

TO MEXICO. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	1,108	68,563	\$44,5
1891.....	849	87,828	46,5

TO HAWAII. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	671	118,986	\$88,5
1891.....	813	152,591	111,5

TO BRITISH COLUMBIA. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	1,035	20,380	\$19,5
1891.....	619	30,654	17,5

To JAPAN AND CHINA. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	324	23,076	\$10,523
1891.....	796	60,697	24,965

To EUROPE. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	305	43,687	\$24,722
1891.....	514	84,365	30,762

To TAHITI. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	25	20,714	\$7,594
1891.....	42	12,978	4,875

To ALL OTHER FOREIGN PORTS. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	200	4,758	\$3,700
1891.....	187	14,087	10,700

The exports of brandy by sea during the two years 1890 and 1891, were as follows:

To NEW YORK. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	80	228,037	\$353,304
1891.....	39	319,203	611,913

To ALL FOREIGN PORTS. (By sea.)

Year.	Cases.	Gallons.	Value.
1890.....	356	75,220	\$109,227
1891.....	375	174,523	134,422

Through the work of the State, assisted by private enterprise, all wine makers and merchants are now in a position to judge exactly of the condition of the trade outside of California. Not only are the shipments known, these being regularly obtained by the Secretary, but private enterprise has enabled us to know the exact distribution of all wine shipped by rail out of the State to all the principal points in the East and in the Rocky Mountain States and Territories.

We are now without absolute data concerning the trade with Oregon, Washington, Nevada, and Arizona, as well as the domestic trade in California. The figures for these States and Territories can be easily obtained, and I would suggest that it is a part of the duty of this Commission to obtain them, in the interest of all producers and shippers of wine and brandy.

To show the status of the trade in imported wines and brandies at San Francisco in the past two years, the following tables prepared from official statistics are presented:

IMPORTS OF STILL WINES IN CASKS.

Year.	Gallons.	Value.
1890.....	71,697	\$50,422
1891.....	60,344	42,000

IMPORTS OF STILL WINES IN BOTTLES.

Year.	Dozens.	Value.
1890.....	21,016	\$83,000
1891.....	21,158	80,000

IMPORTS OF CHAMPAGNES AND ALL SPARKLING WINES.

Year.	Dozens.	Value.
1890.....	26,629	\$389,000
1891.....	22,514	349,000

IMPORTS OF BRANDY.

Year.	Proof Gallons.	Value.
1890.....	34,233	\$80,000
1891.....	22,226	56,000

APPROPRIATIONS NEEDED.

Considering the magnitude of the viticultural industry, and the constant demands made upon the Commission for information and for original publications, etc., and especially for the call for experiments on resistant vines, the same appropriation as was granted by the last Legislature, viz., \$30,000 for the two fiscal years beginning July 1, 1891, should be appropriated for the two fiscal years beginning July 1, 1893. This will enable the Commission to continue its present business untrammelled, and will bring about fully commensurate results to the viticultural industry.

Respectfully submitted.

J. DEBARTH SHORB,
President 1891-92

PROGRESS REPORTS OF C. A. WETMORE AND C. J. WETMORE

Chief Executive Officers.

(FIRST REPORT.)

REPORT OF CHARLES A. WETMORE, Chief Executive Officer.

Read at the meeting held June 8, 1891.

SAN FRANCISCO, June 8, 1891.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I herewith submit a copy of an analytical review of the United States law affecting sweet wines, which I prepared as Chairman of the local Wine Growers' Committee, of Livermore, and which has been transcribed at the request of your Executive Committee, to be forwarded to Mr. F. A. West, now in Washington. [This has been published in pamphlet form.—Secretary.] If this analysis of the law should meet with your approval, I suggest that it would be well to have it printed in pamphlet form for future reference.

It is a matter of great interest to the wine makers of this State, and more particularly to the vine growers who sell their grapes and do not make wine, that the widest possible market for grapes should be created, and that every legitimate method of making pure wines should be fostered and protected against arbitrary rules. In restricting the Sweet Wine law to pure sweet wines made from grapes crushed at the premises of the wine maker in the vineyard district, it was only intended to prevent the use of free spirits in the manufacture of bogus, imitation, or adulterated wines. The law was intended to benefit the grower of grapes; it was not intended to set up any unusual or novel method of using grapes in making sweet wines. It is to the interest of the vine growers of California that such a construction of this law should be made as is necessary to permit Eastern wine makers to make wines out of grapes only, and where it is impossible for them to obtain sufficient saccharine strength in one place, it is to be presumed that they will be permitted to obtain it in another, provided that the material used comes solely from the grape, and is used in connection with legitimate fermentation of the grapes produced in the vicinity of the wine maker.

We desire that the Eastern wine makers may be permitted to use concentrated or boiled grape juice from California whenever their necessities require the same; and if such ruling is made by the department in Washington, the Eastern wine maker will be enabled to use not only our condensed musts, but also our pure brandies in making sweet wines out of Eastern grapes, and our interests as well as the interest of all vine growers, whether East or West, will be subserved, by preventing the necessity of resorting to adulteration or imitation.

CAN THE MARKET VALUE OF GRAPES BE INCREASED IN CALIFORNIA?

The most important question for our people in California at the present time is how to provide a practical method of overcoming the unhealthy condition now prevailing in the market for wine grapes. We all know that a deficiency of capital is the only cause of the present unsatisfactory condition of affairs. Through want of capital to develop and complete vineyard operations, to improve and perfect wines, and to hold the same against normal demands of the market, our vine growers are compelled to sell their products at prices frequently less than the cost of production.

Temporary relief could be obtained by reducing the amount of grapes which are converted into wine or offered for sale by wine makers. However, to accomplish this has been a study of the last few years, and the necessity of the times has been partly met by the drying of wine grapes. The remedy is, however, practical only in certain places and seasons. In addition to this remedy there should be an increased production of wine. For this purpose a large number of new distilleries in the hands of vine growers who have sufficient capital to handle grapes should be created; or, what will answer the purpose better for the present time, in all large vineyard districts there should be coöperative distilleries established by those vine growers who have grapes to sell and the desire to get remunerative prices, as well as also the prospect of larger profits in the future.

It has been the habit generally of these vine growers to rely upon the resources of the relatively few who have wineries established in the vineyard districts; the result of this reliance, however, has been disastrous to both parties concerned. Wine makers have been tempted to make more wine than their facilities or their capital would permit to be done, and prices for grapes have necessarily fallen low. During the present year wine makers who have suffered by purchasing more grapes in the past than they could properly manage, will be tempted to sell at low prices for grapes hereafter, or to refuse to purchase at all. No doubt there is no good reason why vine growers who have grapes to sell should not in the future take care of their own grapes. Generally they should be in better financial circumstances than those who have been buying grapes, and can therefore rely upon themselves with more safety than upon those who have helped them in the past. They owe it to themselves and to wine makers to make an immediate effort to relieve the market through their own endeavors.

In connection with the work of the vine growers of the valley who I have had occasion to give some attention to this subject, and who now to report to you the plan which has been devised, in order that it may be copied as widely as possible and without delay.

Whatever is done for the relief of the market this year must be begun immediately. The plan is as follows:

Some man or committee of men, having business qualifications in the vineyard district, go immediately to those vine growers who have grapes and procure from them contracts promising to deliver a certain number of tons of grapes to a trustee who shall be authorized to permit them to organize a company, the cost of which shall be paid by the brandy which shall be distilled from the grapes contributed. We suppose that contracts amounting to two thousand tons

grapes or more have been procured in one locality; let there be a nominal price fixed for those grapes with a certain standard of sweetness, say \$10 per ton for grapes with 22 per cent or more of sugar, price to be reduced proportionally as the sugar shall fall under 22 per cent; but no variation in price for sugar contained above the standard. If variation in price should be fixed for grapes above the standard, it would probably defeat the purpose of the organization by causing growers to refuse to pick early when required.

Practical men will be free to say that grapes distilled and sold within six months after vintage will return an income of more than \$10 per ton, so that this figure for minimum prices is within reason.

As soon as the grapes have been by these trustees fermented, distilled, and sold, the distillery buildings, cooperage, and other appurtenances which have been created in order to work this plan, may be then out of debt and transferred to the proposed company, and stock issued to those who furnished grapes in proportion to the nominal value as agreed. In this way an effective plant for distilling can be created and paid for within six months from the time of vintage, and there would probably be also a profit, out of which a dividend might be declared, or which might be better used in adding further facilities and cooperage, so that during the next year, if deemed advisable, a portion of the crops offered by the stockholders might be kept as wine without distilling.

Now, as to the practical method of perfecting this plan in different localities. The trouble with the vine growers is that not many of them can pay assessments in cash, but nearly all of them could furnish from one half to the entire amount of their crops, in lieu of cash; some might not be able to furnish more than half, reserving the other half for sale elsewhere to cover their current expenses. The trustee, or trustees, who undertake to carry out such a plan, after they have procured valid contracts for the grapes, with authority to dispose of them, as has been suggested, would find little difficulty in procuring capital or credit to create the necessary plant, with the assurance that they could give that the product in brandy would be realized upon within six months; in fact, I know now that contracts with responsible parties could be procured for the sale of this brandy before the vintage, so that those who would be lending credit to these associations would take no risks.

Now, as to the probable cost of such an operation. Roughly estimated, \$15,000 would be ample to secure land, construct cheap buildings for fermentation only, tanks for fermentation, together with an adjacent distillery of the most improved and effective pattern, capable of managing two thousand tons of grapes in one season. These two thousand tons of grapes would realize, when sold as brandy within six months, not less than \$20,000, so there would be a surplus for management and expenses of operation. It is more than probable that there would be an income of at least \$5,000 more, which could be used to increase the facilities of this winery and distillery for future use. Having obtained stock in this company, after the goods have been sold by the trustees each stockholder would have an interest free of debt, which would be good collateral in case he needs money in his vineyard operations.

By adopting this plan in many different districts simultaneously, and by pushing it forward vigorously in time for the next vintage, the difficulties now besetting our vine growers would be practically overcome, and next year there would be active demand for grapes at good prices.

this plan, in effect, amounts to the capitalization of the surplus grapes in such a manner that future crops can be profitably handled, and during the present year any surplus of wine may be disposed of by distillation.

Unless something is done with energy by those citizens in the different districts who understand the importance of this question, and have the capacity to perfect such plans, as well as also the confidence of the community in which they live, there will be a serious depreciation in the price of grapes which ought not to be permitted. Local action should take place through movements inaugurated by local bankers and merchants whose prosperity depends upon the success of the grape industry. These men should not wait for the growers to get together, but should immediately begin to organize such companies as have been suggested through trustees as suggested.

CHAS. A. WETMORE,
Chief Executive Officer.

SAN FRANCISCO, June 8, 1891.

Board of State Viticultural Commissioners:

GENTLEMEN: At your meeting to be held to-day, the election for the ensuing year will require action on my office. Permitted to withdraw my supposed candidacy for reelection, should such be contemplated.

With sincere appreciation of the uniform courtesy with which I have been treated in the past, and grateful acknowledgments of the honors which have been conferred on me, I desire to sever my official connection with the Commission, trusting that in future its work will be as valuable to the public, and even more so, than it has been in the past.

Respectfully,

CHAS. A. WETMORE,
Chief Executive Officer.

(SECOND REPORT.)

REPORT OF CLARENCE J. WETMORE, Chief Executive Officer.

Read at the meeting held December 18, 1891.

SAN FRANCISCO, December 18, 1891.

Board of State Viticultural Commissioners:

GENTLEMEN: At the request of the Executive Committee, I have spent a portion of the past six months in making a personal examination of the vineyards of the State for the purpose of determining the condition of the crop of 1891, and the extent of damage done by phylloxera, Anaheim vine disease, etc. During August I visited the following counties: Kern, Tulare, Fresno, Merced, San Joaquin, Sacramento, Tehama, and Shasta.

In Kern County the planting of grapevines only commenced in 1888, and at the present time over 2,000 acres have been planted, almost a

in Muscats. The prospects are that a larger area will be planted to vines during the coming season.

During the past two years Tulare County has increased its area in vineyards to a great degree. A few years ago there were but a few vineyards scattered through the county; now there are planted about 20,000 acres, of which 10,000 acres were added in 1891. But few wine grapes have been planted, the bulk of the vineyards being planted in raisin grapes.

Fresno County, in 1891, added at least 10,000 acres in Muscat vines to its already large area, and it is now the banner county in the State as far as area in vineyards is concerned. The number of acres in vineyards in the county is now estimated at 60,000, of which about 55,000 acres are planted to raisin grapes. This large area will be materially increased next year, unless the present low prices of raisins put a stop to the planting. While I was in Fresno I heard of two contracts that had just been made, which called for the planting of 2,250 acres to Muscats in the spring of 1892. The high prices paid for raisins by the packers in 1890 is the cause of the general boom in Muscat planting, and the papers were full of the profits made by this and by that producer, but there was nothing said about the losses sustained by the packers. But very few of the packers made money in 1890, and so this year they held off from buying, except where they could buy at low figures. Prices of raisins have fallen this year to one half the price paid in 1890, and still the greater portion of the raisin vineyards are not yet in bearing.

Mr. George West's report on the future of the raisin industry was timely one, and the truth of his statements has become evident to the raisin producers sooner than was expected. Unless the raisin producers can immediately find an outlet for their product in foreign countries, the raisin industry will meet with a disaster similar to what befell the wine producers after the heavy vintage of 1886. A considerable quantity of the Muscats can be used by the wine makers in making sweet Muscat wine and brandy, but the quantity they can use without injuring the market is limited. The hot weather during July did considerable damage to the first crop of Muscats, but the second crop was uninjured, and was much better than the first. The total output of raisins was larger this year than in 1890, on account of the new vineyards that had come into bearing. The wine grapes were not injured by the hot weather, and the crop was a very large one. Almost all of the wine grapes were converted into sweet wines.

In all of the above-mentioned counties the vines are looking well, except where they are planted in low places and in alkali spots. In the low places the vines are drowned out, due to the seepage from the irrigating ditches. In the alkali spots, the soil not being suitable for vine development, the vines either die or are in a sickly condition. So far the loss from either cause is not great in any of the counties of the great San Joaquin Valley.

In San Joaquin, Sacramento, Tehama, and Shasta Counties the grapes were more or less injured by the hot weather, reducing the crop from one quarter to one third in all of those counties. In some sections of Sacramento County the table grapes were in splendid condition, and I am informed by Commissioner Stephens that the prices realized for him grapes in the Eastern markets were as good, and in some instances

than he ever received before. Grasshoppers did some damage in Sacramento and Shasta Counties, but the most damage was done in the vicinity of Natoma, Sacramento County.

During September I visited Contra Costa, Alameda, Napa, and Sonoma Counties. In Contra Costa County I found that the hot weather had reduced the crop of wine grapes from one fourth to one third. The few wineries in the county. Most of the grapes are shipped to San Francisco, or to wineries outside of the county. The amount of wine made in the county was small. In the Alhambra Valley the proportion of the vineyards is planted to table grapes. The yield of table grapes was not as great this year as in 1890; especially so was the case with the Tokay. I found no trace of the phylloxera in the county.

In Alameda County the crop was about 25 per cent less than in 1890. The shortage came principally from the Livermore Valley. The shortage in that valley was due to the hot spell that came at the end of June, which reduced the crop from 30 to 40 per cent. Only one fourth as many wine grapes were dried as in 1890, but at least one hundred and seven hundred tons of fresh grapes were shipped to Stockton and San Francisco. No phylloxera has as yet been discovered in the county. Around Mission San José and Warm Springs the grape crop this year was as good as in 1890, and a full crop was harvested. The phylloxera has appeared in two places near Mission San José, but the damage so far has been very small. In one vineyard where the phylloxera was discovered last year, about two acres of vines were taken up and replanted to resistant vines. This year the disease has not made its appearance in any other portion of the vineyard, and it is hoped that all of the infected vines were destroyed.

In Napa County the damage done to the grape crop by the hot weather, rain, and phylloxera was very great, and the amount of good grapes made this year was very little over one half what was made in 1890. On the hill lands, where the phylloxera has not made its appearance, the grapes were hurt considerably by the hot weather, but afterwards benefited by the rains that came in September. The rain rotted a large proportion of the grapes on the low lands, but the good it did to the hill vineyards was more than offset by the damage done to the low-land vineyards. From Napa to Rutherford the damage done by the phylloxera is very great, and it is only a question of time when all of the vineyards in that section, and in fact all of the vineyards in the valley, will have to succumb to the onward march of the phylloxera. Those vineyards grafted on resistant vines will be the only ones to escape. From Napa to Rutherford there were in 1890 about 40,000 acres of vines. Since that time at least 3,500 acres have been destroyed by the phylloxera or are so badly infected that they do not pay to cultivate. Of the remaining 3,500 acres, the great portion is already badly infected with the phylloxera, and must succumb within the next three years. The number of acres planted to resistant vines in that section is small, and will not exceed 1,000 acres. During the past three years the phylloxera has made great headway in the vineyards from Rutherford to Krug's Station. It is safe to say that more acres have been destroyed in this section, and fully as many more will be next year. Of all the vineyards in that section, fully three fourths of them are more or less infected. From Krug's to Calisto,

but few signs of the phylloxera are seen, and it will take some time before that section is badly injured. From the last statistics, taken in 1889, I find that the number of acres in vines in Napa County was given at 18,229. Since that time at least 4,000 acres have been destroyed by the phylloxera, and of the remaining 14,000 acres about 7,000 acres are badly infected. A number of the vineyardists are replanting their vineyards with resistant vines, but the low prices of wine and grapes that have prevailed for the past three years have discouraged most of the producers, and they have done nothing in the way of replanting. The Lenoir and Riparia are the resistant varieties that are planted in this valley. On the deep bottom lands the Lenoir does well, and so far appears to be as resistant as the Riparia. The great trouble at the present time, is for those producers who wish to replant to obtain the resistant vines. The suggestion made by Commissioner Priber that the Commission take steps to furnish the vines to the vine growers is a good one, but in order to do so the appropriation for the support of the Commission would have to be largely increased.

Sonoma County has also suffered severely from the ravages of the phylloxera. From Sonoma to Los Guilicos the greater portion of the vineyards have been destroyed, and the wineries in that section have now to procure most of their grapes from the neighborhood of Healdsburg and Geyserville. Around the town of Sonoma only such vineyards as are on resistant stocks are now bearing. If any one doubts the resistant properties of the Riparia, let him visit the vineyards of Messrs. Gundlach and Dresel, and there he will see the different varieties of vinifera in full bearing, and all grafted on Riparia vines. In that section all of the vinifera on their own roots have been killed by the phylloxera, but the vines grafted on Riparia show no signs of disease. From Santa Rosa to Cloverdale the phylloxera has as yet made no headway, and the vines in that section were in a healthy condition, and, where well cultivated, they produced this year a very good crop, although not quite as heavy as in 1890. A large amount of sweet wine was made in this section the past vintage, thus reducing the quantity of dry wines. Around Geyserville most of the grapes were converted into brandy and concentrated must.

During October I visited Santa Cruz and Santa Clara Counties, and in November visited the southern counties. In Santa Cruz and Santa Clara Counties the crop was estimated to be about one quarter short. The loss was due to the effect of the hot weather. No phylloxera has as yet been found in Santa Cruz County, and in Santa Clara County only a few spots have ever been discovered, and the loss from this source has been almost nothing. As a general thing the grape crop in Santa Clara County was better during the past season than in any other county of the State.

In the southern counties the viticultural industry has changed more during the past four years than in any other portion of the State. In 1886 the counties of Los Angeles and San Bernardino produced 4,000,000 gallons of wine, while during the past season but 500,000 gallons were made. This great reduction was due to the Anaheim vine disease, which for the past four years has destroyed all of the vineyards around Orange, Santa Ana, and Anaheim, and a large portion of the vineyards in other parts of Los Angeles County. It is estimated that at least 20,000 acres of vines have been destroyed. Before the disease appeared

in vineyards in the vicinity of Orange yielded the owner \$100 a year. In two years' time all of the vineyards were killed. Small vineyards near Orange were planted last spring for the purpose of determining whether the vine disease had died out or not. They have made a good growth, and so far show no signs of disease. They continue to thrive next year a great many vineyards will be planted in that neighborhood the following year.

The disease has also appeared in San Bernardino County, but it has done as much damage as in Los Angeles County. At Riverside wherever it shows itself the vines are taken up and oranges planted. The area in vines around Riverside is yearly decreasing. The rain in that vicinity was heavy this year, and the weather was 'perfect' during both the first and second crops. In the neighborhood of San Bernardino a great many Mission vines have been killed by the disease. This disease seemed to have a liking for the Mission vine wherever it appeared the Mission vines were among the first to be killed. In the Sunny Slope vineyards all of the Mission vines have been killed, while the disease has only partially killed the other varieties. The Mission grape is a favorite one with the wine makers for making sweet wines, the prices paid for the Mission were higher this year than for the foreign varieties.

It was thought that the disease had appeared in San Diego County in the El Cajon Valley. The only vines that I could find in that valley that were not doing well were those that had been planted in new spots. All of the other vines were doing well, and the crop this year was very good. At Escondido, San Diego County, the first crop was a heavy one this year. The grapes there are late in coming; the last of the first crop was still on the trays when I visited on November 13th. The second crop was left to remain on the vines, there being no winery or distillery in that neighborhood to process them.

After making this complete canvass of the State I have been able to make the following estimates of the crop of 1891:

County	3,500,000 galls
County	2,000,000 galls
County	1,100,000 galls
County	500,000 galls
County	4,000,000 galls
County	300,000 galls
County	1,200,000 galls
County and south	500,000 galls
County and north	500,000 galls
Counties	1,000,000 galls
	14,600,000 galls

The amount includes all the wine made (exclusive of brandy). About 2,500,000 gallons are sweet wines and the balance are dry. Of the 12,000,000 gallons of dry wines there are at least 6,000,000 and a half gallons that will yet be distilled, leaving about 6,000,000 gallons suitable for consumption. Of this amount the market in San Francisco made 2,000,000 gallons, 1,500,000 will be handled by producers who market their own wines, and 2,500,000 gallons have already been sold, leaving but 4,500,000 gallons of dry wines in the hands of the producers, which will be for sale before the next vintage. There is a market now for at least 18,000,000 gallons of wine, a

our production this year was not quite 15,000,000, it will readily be seen that by the time of the next vintage the market will be bare of wines. The outlook for better prices should therefore be very encouraging to the producers who are holding their wines. The increased demand for our wines in foreign countries is one of the encouraging features at the present time. The prices paid for grapes during the past year have ruled very low, and but few vine growers have made any money, and they are naturally discouraged. Some will pull up their vines this year, others have planted trees among the vines with the intention of taking out the vines another year; the ravages of the phylloxera will destroy, yearly, many thousands of acres, and the result must be that our production will decrease each year instead of increasing. It may take one or two years more to clean up the surplus that has accumulated during the past three years. As soon as the demand and supply are equal prices must advance. The outlook now is that the demand will soon exceed the supply. From 1880 to 1885 the demand and supply kept about equal, and prices for new wines were from 20 to 35 cents a gallon. As soon as our conditions are similar to what they were during those years, prices must return to those figures. In fact they should go higher, for our wines are better now than they were in those times.

Respectfully submitted.

CLARENCE J. WETMORE,
Chief Executive Officer.

REPORT OF VITICULTURAL CAFÉ (from Dec. 1, 1890, to Dec. 1, 1891).

SAN FRANCISCO, December 17, 1891.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I submit the following report of the operations of the café:

Month.	Sold.	Other Disposition.	Corkage.	Cash Receipts.	Reserve Fund.	Paid Exhibition.
1890—December	1,131	386	\$94 45	\$463 10	\$26 00	\$437 10
1891—January	981	451	101 30	384 30	27 55	356 75
February	848	288	81 05	329 20	21 65	307 55
March	898	302	89 65	414 90	22 10	392 80
April	766	253	94 10	348 90	29 15	319 75
May	815	327	92 65	338 15	25 40	312 75
June	1,016	252	79 05	419 30	24 55	394 75
July	724	268	75 45	315 90	22 45	298 45
August	702	228	81 80	291 00	24 75	286 25
September	523	137	62 45	203 70	16 65	187 05
October	515	345	57 60	218 20	18 70	199 90
November	719	511	62 75	335 95	17 30	315 65
Totals	9,638	3,748	\$972 30	\$4,062 60	\$276 25	\$3,786 35

Respectfully submitted.

W. H. McNEIL,
Clerk.

(THIRD REPORT.)

REPORT OF CLARENCE J. WETMORE, Chief Executive Officer.

Read at the meeting of the Board held June 13, 1892.

SAN FRANCISCO, June 13, 1892.

To the Board of State Viticultural Commissioners:

GENTLEMEN: During the past six months the work in my department has been performed to the best of my ability. The correspondence has been heavy, referring principally to vine diseases and the remedies:

Acting under directions of the Executive Committee, I issued a circular for the Viticultural World's Fair Convention for May 18th and 19th. The convention was well attended, and considerable good work was done. I have kept up the testing for alcohol by means of the ebullioscope, and during the six months have made twenty-five tests free of charge. I am now preparing a work on the different kinds of machinery and tools used in the wineries and vineyards of the State, and inventing new people here. I will have it ready to go in with our next report. The café connected with our exhibit has not been given the support it deserves, and some action should be taken to-day as to the best means of conducting it or abolishing it. We are conducting the café now at a heavy expense to the State, and if the exhibitors and wine makers of the State do not care to help make it a success, I think we can devote the money to a better purpose. The money could profitably be used in the viticultural exhibit at Chicago.

As the phylloxera is now making great headway in many counties of the State, I think it would be well for the Commission to obtain an experimental plot where the phylloxera now exists, and make a test of the resistant vines known, so that a report could be made upon them and furnished to those parties who wish to plant resistant vines. Such a report would be a valuable one.

Yours respectfully,

CLARENCE J. WETMORE,
Chief Executive Officer.

REPORT OF VITICULTURAL CAFÉ.

SAN FRANCISCO, June 13, 1892.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I beg to report the following operations of the café since last report, December, 1891:

	Bottles Sold.	Other Disposition.	Corkage.	Cash Received.	Reserve Fund.	Paid Exhibitors.
December	778	1,303	\$62 30	\$316 10	\$14 15	\$301 85
January	532	1,935	65 20	219 55	14 80	204 75
February	584	435	53 20	225 35	9 15	216 20
March	478	170	64 20	192 55	15 20	177 35
April	556	167	59 45	206 10	15 20	190 80
May	348	152	56 90	136 95	14 75	122 20
Totals	3,276	4,162	\$361 25	\$1,296 60	\$83 25	\$1,213 35
Sales of bottles, etc.					105 45	
					\$188 70	

Respectfully submitted.

W. H. McNEIL,
Clerk.

REPORT OF CLARENCE J. WETMORE, Manager of Permanent Exhibit and Experimental Cellar.

Read at the meeting of the Board held June 8, 1891.

To the Board of State Viticultural Commissioners:

GENTLEMEN: As Manager of the Permanent Exhibit and Experimental Cellar, I respectfully submit the following annual report:

Since making my last report the exhibit and offices of the Commission have been moved from Platt's Hall to 317 Pine Street. This change was made September 1, 1890. When we were notified that Platt's Hall must be vacated by September 1, 1890, the Executive Committee met and decided to lease the present premises, and instructed me to fit them up for occupancy. The expenses of fitting up the place were as follows:

Carpenter's bill	\$35 15
Painting	197 00
Plumbing	161 00
Total	\$393 15

After all our wines had been arranged in the cellar the proprietor of the building put in an electric-light plant and boiler. The heat from the boiler raised the temperature to 80°, which temperature was, of course, too high for our wines. The proprietor did everything he could to lower the temperature, but failed. After waiting several months the proprietor agreed to let us have the adjoining cellar, which we are now occupying. From the opening of the café in the present quarters the sales of wine showed a marked increase over the sales made in the old quarters. First-class meals are served by the lessees, Messrs. Franckx & Ruhlemaun.

Everything possible has been done to help both merchants and consumers to introduce their wines to the public. A great many Eastern people have visited the café, and have ordered sample cases sent to them. A large club in New York has just ordered six cases of wine, and if the members like them more will be ordered. Up to the present this club has not used any California wine.

The following table will show the business done in the café for the year:

Month.	Bottles Sold.	Amount.	Corkage.	Reserve Fund.
June	289	\$117 80	\$23 65	
July	564	226 35	37 90	
August	441	185 85	41 05	
September	1,119	390 20	92 80	
October	801	297 35	90 30	
November	782	299 35	70 85	
December	1,321	463 10	94 45	
January	1,100	384 30	101 30	
February	971	329 20	81 05	
March	1,029	414 90	89 65	
April	885	348 90	94 10	
May	934	338 15	92 65	
Totals	10,236	\$3,795 45	\$909 75	\$2

The amount received from the sale of bottles amounted to \$88 which amount has been added to the reserve fund, making \$377. The amount on hand in the reserve fund June 1, 1890, was \$67 making a total receipt for the fund of \$445 45. The amount expended during the year for printing, etc., was \$194 45, leaving a balance in hand of \$251. As this money belongs to the exhibitors, I would suggest that a portion of it be used in advertising the café and exhibit.

During the time that the cellar was so hot, a number of sample wines in the experimental cellar were spoiled. Some of the white wines were taken on a sherry taste, and I am now leaving them to develop into sherry.

During the past month, by direction of the Executive Committee, I furnished facilities in the cellar for experimenting with the effect of current of electricity, to determine its effect on wines. The project was brought to my attention by Mr. William C. Spencer, and I have conducted the experiments under my supervision. The report from Mr. Spencer will explain his method and the experiments performed. On account of the shortness of time that the experiments have been conducted, it is impossible to arrive at any definite conclusions. I would suggest that the experiments be carried on for another month, and that Mr. Spencer be paid for his services. From the experiments already made it was found that when the samples were exposed to the air the untreated wines turned on acid faster than those not treated. To verify this statement it would be necessary to make more tests. The treatment showed no marked effects on the claret than on the white wines. I have retained samples of the wines treated, and they can be tested at any time. During the year sixty-six samples of wine have been sent to me to be tested for alcohol, and eight samples to be tested for acid. The analyses were made free of charge.

FINANCIAL REPORT.

Amount expended from July 1, 1890, to May 1, 1891 (10 months).....	\$14,442 24
Estimated expenses May and June—	
Salaries.....	\$820 00
Rent.....	620 00
Gas and water.....	30 00
Office expenses.....	100 00
Commissioners' expenses.....	150 00
Statistics.....	75 00
	1,795 00
Amount of appropriation available.....	\$16,237 24
	17,500 00
Apparent balance unexpended.....	\$1,257 76

C. J. WETMORE,
Manager.

REPORT OF W. B. RISING, STATE ANALYST, ON THE MANUFACTURE OF CREAM OF TARTAR.

PRELIMINARY REPORT.

BERKELEY, December 16, 1891

To the Board of State Viticultural Commissioners:

GENTLEMEN: I beg leave to furnish the following statement of progress made by me in the work which I was instructed by you to make on behalf of the Board.

My study and experiments have been specially directed towards the purification of the cream of tartar in wine residues, and especially from pomace.

Below will be found a number of determinations of the cream of tartar from pomace from various parts of the State:

Samples from I. DeTurk, Santa Rosa.

1 Red.....	5.98 per cent cream of ta:
1 White.....	6.63 per cent cream of ta:
1 Red.....	5.18 per cent cream of ta:

Samples from H. B. Wagoner, Livermore.

1 Mustaro.....	2.99 per cent cream of ta:
1 Mustaro.....	3.10 per cent cream of ta:
1 Pinandel.....	4.76 per cent cream of ta:

These samples contained a large proportion of stems.

Samples from the Napa Valley Wine Company, Napa.

1 Orignan.....	5.61 per cent cream of ta:
1 Burger.....	3.42 per cent cream of ta:
1 Mission.....	3.57 per cent cream of ta:
1 Malvoisie.....	4.89 per cent cream of ta:
1 Pinandel.....	4.99 per cent cream of ta:

No. 11 contained some stems.

I shall continue this study with special reference to the practical and profitable extraction of the cream of tartar, the results of which will be communicated to your Board in the form of a thorough and somewhat extended report.

I have commenced an examination of the clays of the State, with a view to discover a substitute for the imported Spanish clay.

I have continued the study of mannite and milk-sour wines, which I shall continue.

The request by the Agricultural Department in Washington to prepare a report upon the adulteration of wines on this coast is under consideration. I am very much in need of a set of analyses of standard wines produced here. The rules for judging of adulteration should be laid down much more closely than is now the case. (See report taken by your Board a year ago, I think.)

Another study has suggested itself to my mind, viz.: a more careful examination than has yet been made of the acids present in certain wines, whether free tartaric, and how much is present, or what amounts of malic, etc., and other acids.

Respectfully submitted.

W. B. RISING,
State Analyst.

SECOND REPORT.

UPON THE MANUFACTURE OF CREAM OF TARTAR FROM POMACE.

Cream of tartar may be obtained as a side product of the wine industry. The *lees* and the *pomace* are the raw materials from which it may be extracted. As is well known, cream of tartar is less soluble in water containing alcohol than in pure water; consequently the development of alcohol by the fermentation of the sugar in the grape juice tends to precipitate the cream of tartar. This precipitation is slow and dependent upon two factors, viz.: (1) The amount of tartar originally present in the grape juice, and (2) the amount of alcohol in the wine developed during fermentation. The slowness of the precipitation is only in keeping with the general principle of the formation of crystalline precipitates. A very slightly supersaturated solution of a crystalline salt separates that salt slowly. In the case of the wine this is modified and delayed very materially by the presence of the "extract matter," etc., contained in the wine. This sediment, which forms after months of standing, is known as *lees*. It is composed of impure cream of tartar, coloring matter, some tartrate of lime, and "sediment," the whole more or less suspended in the wine. The general rule observed is this: The wine is drawn off from the sediment until it becomes turbid, the muddy sediment forming the *lees*. This may be filtered and pressed, when a crude tartar or argol is obtained, which may be sold to the cream of tartar works to be refined, or may be partially refined by the wine maker by a process to be hereafter described. The wine obtained by pressing the lees will probably be best utilized by distilling it for the brandy, or the lees may be directly added to the fresh pomace when this is used to make pomace brandy. The tartrate of lime cannot be recovered by any simple process applicable at the winery, and consequently will necessarily be lost.

Treatment of crude cream of tartar, or argol, obtained by filtering and pressing the lees:—I cannot too much emphasize the importance of a knowledge of the *principles* of chemistry, and the value of some experience in chemical manipulation, in the introduction of a new industry which involves, even to a small extent, chemical principles. When exploring a new field it is well, and in many cases *absolutely* necessary, to know the direction in which the object to be sought lies. We cannot explore the whole field, and it is not necessary when we know the direction. Where obstacles which cannot be passed intervene, we pass around them, but return to the straight path which leads to the object sought. A knowledge of chemical principles involved points out the path to be taken, and when we deviate for any reason from the direct path, we return to it at once and without loss of time and energy.

The general principle involved in the preparation of cream of tartar is this: This salt is several times more soluble in hot water than in cold; consequently, if we prepare a saturated solution hot (at the boiling point of water, 100° C. or 212° F.), upon allowing this solution to cool, a part, the larger part of the tartar will separate upon cooling. The salt which separates will be purified, at least sufficiently for sale in the refinery. We will now have a portion of the crude tartar in a crystalline form, but another portion, however, remains in the mother liquor. This tartar could be obtained from this liquor by evaporation, but experience has shown that it is not profitable. In addition to the tartar left behind, it contains other matters ("extractive") which, to a certain extent, interfere with the crystallization of the tartar. Another liquor must either be used again to extract crude tartar, or precipitated by lime as tartrate of lime, or be thrown away. On a small scale the precipitation with lime is not advisable, on account of the gummy nature of the precipitate and the difficulty in manipulating it. It will only be resorted to as a last necessity as a means of saving part of the tartar in the liquor. It molds very easily, so that much is required to save it.

Below will be found a table showing the solubility of cream of tartar in water at different temperatures:

32° F.	0.32 parts in 100 parts
40° F.	0.40 parts in 100 parts
50° F.	0.57 parts in 100 parts
60° F.	0.90 parts in 100 parts
70° F.	1.31 parts in 100 parts
80° F.	1.84 parts in 100 parts
90° F.	2.40 parts in 100 parts
100° F.	3.20 parts in 100 parts
110° F.	4.50 parts in 100 parts
120° F.	5.70 parts in 100 parts
130° F.	6.90 parts in 100 parts

A study of the above table will show how rapidly the solubility of cream of tartar increases with the temperature. While our table gives the solubility at the boiling point of water, it is fair to assume that at a still higher temperature the solubility of the tartar will be greatly increased. The refinery intended solely for the refining of crude tartar, or argol, it will be best to extract under a pressure of say 75 to 100 pounds. A solution saturated at such a temperature would contain, I should judge, from the hurried plotting of the curve of solubility, say twelve parts of the cream of tartar in one hundred parts of liquor, which, if cooled to 86°, should deposit eleven parts, i. e., eleven twelfths of the amount dissolved. If a saturated solution it would be better to grind the crude tartar to a fine powder, adding it in slight excess. Some provision for the removal of the tartar during the digestion would be of much advantage to shorten the time of digestion very materially. Such a method would require copper vessels and a copper coil, returning to the steam boiler, the condensed steam used for heating. Inasmuch as the tartar is added in excess, this excess would remain, together with the greater part of the difficulty, soluble tartrate of lime. This could then be added to a second charge, giving it time to digest well before adding another charge. As soon as the first liquor has deposited its excess of tartar, it could then be used to dissolve a fresh charge of crude tartar.

I wish to express my obligation to Dr. McMurtin, chemist of the New York Refinery, who furnished me the above table.

During the discharge of the liquor from the tank or digester where it was under the supposed pressure of 75 pounds, a very large evaporation would take place, so that fresh water must be added to the mother liquor to make up the required amount of liquid. The tartrate of lime would accumulate in the digester, and could be used in the manufacture of tartaric acid. The process as above sketched is, in my opinion, only applicable to a factory designed to refine crude tartar. The requirements are too great to be met in an ordinary winery, and would not pay when the operation would only be carried on a small part of the year. An argol containing 60 to 85 per cent of tartar ought to bring a price proportional to the tartar contained less the cost of refining, and this would be far less at a well-equipped and well-directed factory than at any winery.

An alternative treatment of the lees will be given in connection with the extraction of the tartar from the pomace.

The pomace is the material which is left in the press after the liquid has been pressed from the grapes, and will differ according to the grapes used, the method of treatment, etc. It consists of skins, seeds, pulp, and sometimes stems, etc., of the grapes. The amount of tartar in the pomace will differ with the variety of grape, and with the locality and climate where it was grown. Sweet grapes in warm climates will contain less; sour grapes, in colder sections, more; but the greatest difference will be caused by the treatment of the grapes. When fermented upon the skins the pomace will be richer in tartar, increasing to a certain extent with the time the wine is left upon the pomace. I have examined samples of pomace from the following named vineyards, with results as given in my former report:

Samples from I. DeTurk, Santa Rosa.

1. Red.....	5.98 per cent cream of tartar.
2. White.....	6.63 per cent cream of tartar.
3. Red.....	5.18 per cent cream of tartar.

Samples from H. B. Wagoner, Livermore.

4. Mataro.....	2.99 per cent cream of tartar.
5. Mataro.....	3.10 per cent cream of tartar.
6. Zinfandel.....	4.76 per cent cream of tartar.

These samples contained a large amount of stems.

Samples from Napa Valley Wine Co.

7. Carignan.....	5.61 per cent cream of tartar.
8. Burger.....	3.42 per cent cream of tartar.
9. Mission.....	3.57 per cent cream of tartar.
10. Malvoisie.....	4.89 per cent cream of tartar.
11. Zinfandel.....	4.99 per cent cream of tartar.

No. 11 contained some stems.

I have made other determinations of the amount of tartar in pomace on a larger scale, taking good average samples, and can, I think, give 5.5 per cent as the average percentage of tartar contained in the pomace of the Napa Valley, where the wine has been fermented upon the pomace. In districts where the percentage of sugar in the grapes is higher, the amount of tartar will probably be less. If sugar has been added to the pomace after the first fermentation, and fermented a second time to make piquette, the tartar will be very considerably lessened. Washed pomace will contain less than unwashed, and when the pomace has been

subjected to distillation to make pomace brandy it will contain very little. The problem to be solved is the utilization of the pomace to the greatest advantage, with least cost and least trouble to the wine maker. It is not to be considered wholly as a chemical problem, viz.: The extraction of the cream of tartar, in a factory with experienced skilled workmen and a competent directing chemist, with a laboratory for checking and testing every operation, and saving every product, even the smallest and least valuable, but rather the attempt to save something which up to this time has been thrown away.

I think it very probable that it will be found more profitable to establish a few large factories at central points, collecting the pomace and working it with greater care and saving than is possible when it is done on the smaller scale. Private enterprise and private capital will undoubtedly establish such factories and run them if they can see a return for such an investment.

PRESERVATION OF POMACE.

Pomace can be preserved for a time if closely packed in pits covered with clay to exclude air. This, of course, is only done for a short time, to prevent the molding, which effects the complete destruction of the tartar. In fact mold is one of the enemies of the tartar, and its extraction and crystallization is liable to greatly injure it. Between the temperatures of 75° to 100° F., it is very liable to attack and the process must be stopped when it once sets in. On this account the winter season is best adapted to the extraction of the tartar; the mother liquor can be cooled to 60° F., i. e., to a point below which mold is likely to form.

In my opinion the most favorable outlook for the successful extraction of tartar from the pomace is in connection with the manufacture of brandy from the same. The suggestions which I have to offer are based upon this supposition. The preparation of pomace brandy has been so well and fully treated in the publications of your Commission that I need only refer to them at this time. The distillation of alcohol from the pomace in no way interferes with the subsequent extraction of the cream of tartar. On the contrary it may well form part of one and the same operation. The following steps may be named in the extraction of the tartar from the pomace.

- I. Distillation of the alcohol.
- II. Extraction or solution of the tartar.
- III. Crystallization of the tartar from the solution.
- IV. Utilization of the mother liquor.

The distillation of the alcohol I pass over, because it is a process already well known and in common use.

The extraction of the tartar is accomplished at the same time as the distillation of the alcohol is carried on.

The principles involved have already been set forth pretty fully in the preceding report of the extraction of the tartar from the lees. Water at the boiling point is able to hold in solution about 6 per cent of the cream of tartar. This is the very maximum that it can dissolve, and a long digestion at the boiling point is necessary to bring it to this saturation. Practically, it will be difficult to reach this point, because if attempted the amount extracted from the pomace with the

treatment would be but partial, and a second or third treatment would be required. The operation would become too complicated for small works, and would require more time and skill than I can believe would be profitable. Experience will soon indicate how much water must be used; if too much is used the tartar will not crystallize out, and if too little the extraction will be but partial. I think that experience has shown that about 1 per cent of tartar will remain undissolved in the pomace, and that a better result will cost more than it is worth. It is desirable to separate the liquor containing the tartar as completely as possible from the pomace. When this mother liquor remains the cream of tartar dissolved in it will be lost. This is one reason why the extraction of tartar from the pomace is so imperfect. This hot liquor is run into open tanks to cool. I would suggest shallow tanks, so arranged as to allow a free circulation of air, so that evaporation as well as cooling may take place. If the solution is strong enough a crystallization will begin as soon as the temperature lowers. The crystals begin to form upon the sides and bottom of the tanks, or upon any objects that may be suspended in the liquor. Strands of rope suspended in the liquor may be used, and in time may become heavily loaded with crystals. Apparently it makes little difference with the final yield whether the threads of rope are suspended in the liquor or not. The crystals have seemed to me to be a little purer. The length of time necessary to deposit the crystals will vary somewhat, and experience and observation will be the best guides. At the end of six days the operation will be nearly, if not entirely, ended; the liquor can be drawn off by means of a siphon and fresh liquor run into the tank. The use to be made of this mother liquor will be discussed later on. During the hot months mold may begin to form upon the cooling liquor, and great care should be taken to keep the place clean, and to avoid spilling mother liquor upon the ground. When rope strands have been used they may be removed as soon as they are heavily laden with crystals of tartar, and allowed to drain, and then to dry, when they are ready for market. The first liquor will hardly deposit any crystals, because it will be difficult to bring it near enough to the point of saturation. This liquor can be used a second time, instead of fresh water, to extract the tartar from fresh pomace. How far it may be wise to use the old mother liquor in the extraction of the tartar, will be a matter in which the operator will be guided by his own experience. After a time the "extract matter" will interfere to a certain extent with the crystallization of the tartar, and fresh water must be added. As a rule, a certain amount of evaporation will take place, and this must be made good by the addition of fresh water. This is the most unsatisfactory part of the operation, and no fixed rule can be given. If mother liquor accumulates, the excess must be run off, as any attempt to utilize it will cost more than it is worth. As stated in connection with the treatment of lees, it may be treated with the milk of lime, but the process is disagreeable to manipulate, and the product not very valuable. I think I have outlined the process in such a manner that it can be successfully inaugurated and carried on within the bounds which are prescribed by the conditions of the problem.

The outfit or plant necessary for carrying out the process may require a brief consideration. I shall not consider the various ways of handling the pomace, and transferring it to the pomace still and emptying the

The "pomace still" can be used for the tartar extraction with few modifications and alterations. Inasmuch as cream of tartar acts upon iron, it is very desirable to substitute copper pipes for reducing the steam. It would be much better to heat the still with a steam coil, and return the condensed water to the boiler.

The vats or tanks for receiving the liquor containing the tartar may be of any convenient form and size. I would suggest moderate size and not too deep. Cheapness will be an important consideration; pine is preferable to redwood. They should be devoted exclusively to this work and once used for it. The wood takes up a considerable amount of tartar, and consequently old tanks are better than new, because they are already saturated. The last traces of tartar are removed from the tanks by scraping, the product placed in sacks and hung up to drain, and finally dried, when it will be ready for market.

The following tables, kindly furnished by the Department of Agriculture, will be of interest, showing the amount of crude cream of tartar supplied to this country by the various countries of Europe.

Up to this time the amount of tartar supplied by this country is very small, and can be almost neglected:

Imports of Crude Tartar for the Year ending June 30, 1891 (by Countries).

	Pounds.	Value.
Austria-Hungary	1,252,621	\$146,354
Belgium	7,028	296
France	4,350,939	518,477
Great Britain	44,996	6,477
Italy	950	38
Spanish possessions and adjacent islands	52,033	3,357
Switzerland	14,015,213	1,348,581
Germany	1,711,401	157,797
Denmark	25,426	1,112
Netherlands	118,495	15,018
Total	21,579,102	\$2,197,507

Importation of Crude Tartar into the United States for the Fiscal Year ending June 30, 1891 (by Ports).

Customs District.	Pounds.	Value.
New York	147,000	\$13,787
San Francisco	950	38
New York	21,198,663	2,155,762
Philadelphia	219,719	26,754
Baltimore	12,770	1,166
Total	21,579,102	\$2,197,507

Value and Quantity of Crude Tartar Imported for a Series of Years.

Year.	Pounds.	Value.
1881.....	14,275,530	\$2,289,085
1882.....	18,320,366	3,013,378
1883.....	16,112,427	2,768,988
1884.....	19,591,039	3,263,315
1885.....	17,694,336	2,900,501
1886.....	16,041,666	2,605,106
1887.....	22,024,768	3,412,087
1888.....	17,226,491	2,820,512
1889.....	21,429,434	2,490,871
1890.....	24,927,373	2,800,731
1891.....	21,620,695	2,197,507

Respectfully submitted.

W. B. RISING,
State Analyst.

REPORT OF COMMISSIONER J. DE BARTH SHORB.

THE PRESENT CONDITION OF THE VINEYARDS OF THE SOUTHERN
COUNTIES WITH RESPECT TO THE ANAHEIM DISEASE.SAN GABRIEL, LOS ANGELES COUNTY, CAL., }
August 8, 1892.

The vineyards in the counties of Los Angeles, Orange, San Bernardino, and San Diego may be generally said to be in better condition than they were when the special investigation into the Anaheim disease was stopped at the beginning of 1891.

Since that time there has been a steady decrease in the amount of disease amongst the vines. In some places it appears to have quite disappeared. The present condition of the vines in the different counties may be summed up as follows:

LOS ANGELES COUNTY.

The vineyards in the San Gabriel district are in good condition on the whole. A few cases of Anaheim disease may be scattered about, but none have been noticed in which the disease had started after the foliage had been put out. All the cases seen were of old standing, *i. e.*, the vines had been attacked some time during the previous seasons. In the Lamanda Park and Sierra Madre districts there was a little more disease, and a few vines—not more than half a dozen—were seen in which the disease had asserted itself after the foliage had been put out this season. Nevertheless, there was a marked improvement in the condition of the vines.

At Pomona and Spadra, where the vines had been properly cared for, the vineyards were in splendid condition. There were a very few old cases of disease, but no new ones. In this district many of the vines had been taken up to make room for fruit trees. Already over a fourth of the acreage listed in the new Directory published by the Board has been uprooted, and more will follow.

In the San Fernando Valley district, in which may be included Glendale and Tropic, some of the vineyards are in splendid condition. Others are not in such good condition. Some have been quite neglected; others only partially cared for, and in these various diseases have done much mischief. The best vineyards are in the upper part of the valley. One of these, of some two hundred acres in extent, is in splendid condition. It does not show any sign of the Anaheim disease, and indeed never has been afflicted by that malady.

In La Cañada district many of the vines have been taken out, and others will follow in the fall. The vines which are left are in good condition. There are a few scattered cases of disease, all of old standing, but in some vineyards no disease was seen.

In most of the vineyards throughout the county, though not in all,

there might be seen either small patches of vines or single plants affected by chlorosis, and there was also some sunburn. As a whole the indications are for a good crop, and in some places for a very good one.

SAN BERNARDINO COUNTY.

In the Ontario district the vineyards were all in excellent condition, having been well cared for. Not a single case of disease was seen in Ontario itself. A few miles from the township there is an old vineyard of Mission vines, over twenty years of age. This has suffered in a few isolated patches of small area from Anaheim disease, and there are still a few diseased vines, but they are all of old standing, and are confined to the originally diseased areas. The rest of the vineyard is in excellent condition.

In the Cucamonga district many of the vineyards are in good condition, though in a few there was a considerable amount of disease, several vines having been attacked after the foliage had been put out this year, but even here there seemed to be a decrease in the amount of disease. In this district there was also a considerable amount of chlorosis, and in one vineyard many vines were affected with Spanish measles.

ORANGE COUNTY.

In the county of Orange, where the disease first originated, and where, practically, every vine was destroyed, all the young vines recently planted are in a very flourishing condition; and it may be said with confidence that the disease has there run its decimating course. Although this is the case, it is very doubtful if the large acreage in vines, which formerly beautified and enriched that district, will ever be reestablished, as the demoralized condition of both the wine and raisin markets gives small hopes of satisfactory returns on the capital, time, and labor necessary to be invested in building up these industries.

SAN DIEGO COUNTY.

In the county of San Diego, and especially in El Cajon Valley, the vines are in a remarkably healthy condition, and will produce this year an average crop of grapes. All evidences of recent incursions of the disease have disappeared, and, in fact, at no time in this very fruitful valley had it ever taken a very strong hold. It will be remembered that it was in the valley of El Cajon, where a government scientist sent out from Washington to examine into this remarkable disease saw evidences of it throughout all the vineyards, and announced to the people as the result of his investigation that within another year there would not be enough grapes grown in the valley to supply the home consumption of table grapes in San Diego City and County. I was assured by one gentleman in charge of the largest vineyard there, that this ill-advised statement has cost El Cajon Valley not less than \$200,000, by frightening away intending investors. It is true, that at the time this statement was made the disease had undoubtedly made inroads in some of the vineyards, and in some places a general languishing condition of the vines was observable; but this condition was probably brought about more from an inadequate supply of water for irrigation at the

and from an alkali soil in some places, rather than from the effects of the Anaheim disease itself.

From want of time no recent examination of the vineyards in Ventura, Santa Barbara, or the San Joaquin Valley counties has been made, but from statements of reliable parties residing in these counties, I am assured that a general improvement in the condition of the vines is everywhere observable.

Respectfully submitted.

J. DEBARTH SHORB,
Commissioner.

REPORT OF I. DE TURK,

Commissioner for the Sonoma District.

SANTA ROSA, July 1, 1892.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I herewith submit the following biennial report as Commissioner for the Sonoma District:

Since my last report, made in 1890, there has been but little or no planting of new vineyards in this district. The prices that have been realized for wines have been so unsatisfactory that nobody is encouraged to plant, and in the meantime the phylloxera has been steadily advancing up the Los Guilicos and Bennett Valleys toward Santa Rosa. What little planting has been done has been largely in the nature of setting out resistant stock in the vineyards already devastated by the phylloxera, and I have doubts that the area of vines in this district is as large as it was in 1890, when there were reported 24,450 acres of vines, of which 22,685 were in bearing. Another cause which has contributed to the loss of acreage, has been the uprooting of vineyards by discouraged growers, who have planted orchards and other crops instead.

Aside from the phylloxera the district has been remarkably free from insect pests. The "flea beetle" and the thrip have appeared, but have not done much damage.

The vintage of 1891 was very favorable, and if the quality and quantity of the wine produced are to be taken as indications of success, it was one of the most successful ever known in the district. The 1891 wines I believe will turn out remarkably good, but unfortunately the prices are not what is wanted.

The vintage of 1892 will be at least 33½ per cent short in Sonoma County. The spring frosts did much damage, particularly in the Los Guilicos Valley and other adjoining sections. This disaster was followed by several weeks of unseasonable and unusually cold weather, which further aggravated the situation and reduced the crop. This has made holders of 1891 and other wines in the county very slow about disposing of their holdings, and there is little willingness to sell, all believing that the short crops must eventually make prices better.

Through the kindness of Mr. A. V. La Motte, of Glen Ellen, Mr. Oulevy, of Kohler & Frohling's cellar at Glen Ellen, and Mr. D. D. Davisson, of Sonoma, as well as by personal observation, I am enabled to give some information as to the extent of planting with resistant vines in Sonoma Valley, around Glen Ellen, and in the Los Guilicos Valley. I should estimate the acreage in resistant stock as follows:

Grafted and in full bearing, 500 acres.

Grafted and beginning to bear, 500 acres.

Not yet grafted, 700 acres.

This is a good showing, but it will be improved upon largely when

There is the least sign of a revival in the price of wine. Let some encouragement be given to producers, and there will be many who will set about planting resistant stock and bringing a vineyard into bearing, laborious and expensive as it is.
Respectfully submitted.

I. DeTURK,
Commissioner.

METEOROLOGICAL RECORD

Observations taken by Station Agent GEORGE R. STONE, of Southern Pacific Company, at Santa Rosa Station, from September 1, 1890, to July 31, 1892.

MONTH.	TEMPERATURE.			Rainfall Inches.	WEATHER.		
	Max.	Min.	Mean.		Days Clear.	Days C'dy.	Days Partly C'dy.
September	88	48	65	.20	27	1	2
October	86	40	63		29		2
November	75	33	53		27		4
December	62	31	47	3.93	15	6	10
January	69	27	50	1.25	19	5	6
February	62	30	43	10.49	9	10	7
March	75	35	56	1.22	11	9	11
April	79	38	54	2.39	18	5	8
May	80	42	62	1.23	14	6	11
June	103	43	65		26		4
July	96	50	69	.75	25	3	3
August	102	50	69		30		1
September	90	67	45	.20	21	5	4
October	81	38	59	.20	22	4	5
November	79	33	56	1.50	27	4	
December	70	27	49	8.64	11	8	12
January	65	31	49	3.43	16	3	12
February	68	31	51	5.07	9	10	12
March	85	35	55	4.14	15	6	10
April	76	35	55	2.65	14	5	12
May	87	49	62	3.78	14	7	10
June	84	51	64		17	4	9
July	90	50	70		28		3

REPORT OF GEORGE WEST.

Commissioner for the San Joaquin District.

Stockton, February 1, 1891.

In reviewing the progress of grape growing in the San Joaquin district since my last report, a greater development will be shown than in any other part of the State.

In the county of San Joaquin there has been no marked increase in the acreage of vines. The entire acreage will not exceed three thousand. The vineyards are devoted exclusively to table and wine grapes, both of which are profitable. Many of the wine vineyards have paid \$100 per acre at the prevailing price of \$12 or \$15 per ton for wine grapes.

Table grapes are more profitable, and have been sold at from \$35 to \$60 per ton. The demand seems unlimited, and it is probable that a large acreage will be planted. The production of wine for 1890 was five hundred thousand gallons.

Stanislaus County has done little so far, but contains thousands of acres of fine land, which will soon be developed by the several irrigation schemes now materializing. The county is well adapted to the growth of raisin grapes, to which the most attention will probably be paid for the present. There will be a large planting this winter.

Merced County has done considerable planting in the past year, and this season will see a large acreage planted to Muscats, which will undoubtedly thrive. Wines and brandies of a good quality have been produced. The county now contains nearly 2,000 acres of vines.

Kern County has about 1,200 acres of Muscats, mostly young vines, all of which are doing well. A larger planting will follow this winter.

Tulare County has done more than any county in the district, except Fresno, in developing the grape industry. The growers now number four hundred and sixty-five, owning 10,000 acres of vineyard, 2,500 acres of which are in bearing. Few wine grapes are grown. All the raisin vineyards are in good condition, and those in bearing are paying handsomely. The present winter will see an exceedingly large acreage of new vines planted.

We now turn our attention to Fresno County, the banner grape-growing county of the State.

The county contains 49,500 acres of vineyard, owned by about one thousand six hundred growers; 5,600 acres are planted in wine grapes, and 43,900 acres are in raisin grapes. The wine vineyards are nearly all in full bearing now, and are good paying investments. The vintage of 1890 was probably the largest that will be seen in California for many years, and as the production and consumption are nearly equal, the consumption increasing, and the production as large as it will be for many years, the growers can look forward with tolerable certainty to at least ten years of good prices, even if the marketing conditions were not changed. I can, however, see nothing to encourage or stimulate the planting of wine vineyards at present.

The market for the past two years has been greatly relieved by the growing of many thousand tons of wine grapes, which were sold as dried grapes. A general impression prevailed last season that these grapes were largely used in making wines in the East. In this opinion I do not share, as I know positively that very large quantities were actually sold to take the place of other dried fruits, especially prunes. There will be a market for this product until supplanted by the Muscat, but at that time the quantity now dried will not in any way affect the market when turned into wine.

Fresno County produces Ports, Sherries, Angelicas, Sweet Muscats, and brandies of excellent quality. The sweet wine industry, developed under the new Sweet Wine law, will undoubtedly assume large proportions, and the growers are certainly to be congratulated on the bright prospects for good prices, and a constantly increasing demand for their products. A very considerable export trade has been built up in the business of shipping California brandies to Europe, which will have a tendency to relieve the market of any surplus, and insure good prices.

In the wineries of Fresno County about 12,000 tons of grapes were crushed during the vintage of 1890, the product being turned into sweet wine and brandy.

It is upon the raisin business that the chief interest of the growers of this district is centered.

The importance of this industry to the State in general, and the San Joaquin Valley in particular, cannot be overestimated. There are now over two thousand three hundred vineyard proprietors in this valley, most of whom are growing raisins. This number will be largely augmented during the present winter. Large tracts of land in all the counties of the valley are being subdivided, and sold in tracts of from ten to forty acres, many of which are bought by people who intend settling upon the land purchased, and embarking their all in the raisin business. Whether they will meet with disaster or not time only can tell, but if they are planting with the idea that the present prices will be maintained, they will most unquestionably be disappointed, for the most enthusiastic prophets for the future of the business admit that prices must come down; and there are many of our best informed growers and packers who are now predicting that the raisin business will, in a few years, be in a worse condition than the wine business was in the years 1888 and 1889. This industry has been developed at such a remarkable rate, that it was deemed of the utmost importance by this Commission that the most accurate possible statistics be compiled to show the total acreage planted, the acreage in bearing, and the acreage yet producing, in order that these figures could be placed before those who are now contemplating planting. This has been most carefully done, as the Directory of the counties mentioned will show. The result of this investigation is as follows:

County.	Total Acres in Vineyard.	Acres in Wine Grapes.	Acres in Raisin Grapes in Bearing.	Acres in Raisin Grapes not Bearing.	Total Acres in Raisin Grapes.	Number of Growers.
Fresno	49,500	5,574	17,750	26,176	43,926	1,600
Stanislaus	9,919	45	2,552	7,322	9,874	465
Merced	1,200			1,200	1,200	40
Kern	1,855	425	212	1,218	1,430	65
Tulare	62,474	6,044	20,514	35,916	56,430	2,170

From this it will be seen that there are now planted in raisin grapes in the San Joaquin Valley 56,430 acres. It will also be apparent that 20,000 acres are in bearing now, but it must be remembered that not one half of these are in full bearing.

Among all growers one hundred boxes of twenty pounds each per acre is considered a very moderate yield for a raisin vineyard in full bearing. Hence, the 56,000 acres in the San Joaquin Valley may be relied upon to produce in four years' time 5,600,000 boxes of raisins. Twenty thousand acres may safely be considered planted in raisin grapes in the State outside of this valley. These vineyards will produce, when in full bearing, 2,000,000 boxes, making a total of 7,600,000 boxes of raisins for the State from the vineyards now planted. The plantings of the spring of 1891 will be very large—probably 15,000 acres in this valley—which will fully offset any part of the acreage now planted which may from any cause prove failures. With these figures before us, which are certainly conservative, it is well to turn to the statistics of production and consumption in America. From the best sources of information obtainable, the following statement of production of raisins in the State since 1873 is given:

1873.....	6,000 twenty-pound boxes.
1874.....	9,000 twenty-pound boxes.
1875.....	11,000 twenty-pound boxes.
1876.....	19,000 twenty-pound boxes.
1877.....	32,000 twenty-pound boxes.
1878.....	48,000 twenty-pound boxes.
1879.....	65,000 twenty-pound boxes.
1880.....	75,000 twenty-pound boxes.
1881.....	90,000 twenty-pound boxes.
1882.....	115,000 twenty-pound boxes.
1883.....	140,000 twenty-pound boxes.
1884.....	175,000 twenty-pound boxes.
1885.....	470,000 twenty-pound boxes.
1886.....	703,000 twenty-pound boxes.
1887.....	800,000 twenty-pound boxes.
1888.....	950,000 twenty-pound boxes.
1889.....	1,250,000 twenty-pound boxes.
1890 (estimated).....	2,040,000 twenty-pound boxes.

From the statistics of the United States Bureau of Statistics of the Treasury Department have been collected the following figures showing the total imports of raisins into the United States, in pounds. These, for purposes of comparison, have been reduced to twenty-pound boxes, though the bulk of foreign raisins comes in twenty-two-pound (ten-kilogram) boxes. No figures can be obtained prior to 1884, at which time the Bureau separated raisins from the classification of "dried fruits." The imports for the fiscal years ending June 30, were:

Year.	Pounds.	In 20-pound Boxes.
1884.....	53,702,220	2,685,111
1885.....	38,319,787	1,915,989
1886.....	40,387,946	2,019,397
1887.....	40,673,288	2,033,614
1888.....	40,476,763	2,023,838
1889.....	35,091,139	1,754,557
1890.....	36,914,330	1,845,716

Adding the California product in twenty-pound boxes, and the imports abroad in the same unit, the result is the total American consumption. Its results as follows:

Year.	Imported in 20-lb. Boxes.	California—20-lb. Boxes.	Total American Consumption—20-lb. Boxes.
.....	2,685,111	175,000	2,860,111
.....	1,915,989	470,000	2,385,989
.....	2,019,397	703,000	2,722,397
.....	2,033,614	800,000	2,833,614
.....	2,023,838	950,000	2,973,838
.....	1,754,557	1,250,000	3,004,557
.....	1,845,716	1,400,000	3,245,716

The above tables are for the fiscal years ending June 30th, and what the California crops of 1890 will have upon the imports cannot be told.

From these statistics it will be gathered that the total consumption of raisins in America at the present time is about 3,250,000 boxes, including dried grapes. The yield from the vineyards now planted in California, when in bearing, will, at the most conservative estimate, be more than double that amount.

The consumption of raisins in this country increased only 400,000 boxes in the years from 1884 to 1890. Allowing for a much greater proportionate increase of consumption for the next few years, the consumption of America, when the California vineyards of to-day are in bearing, may be placed at 4,000,000 boxes. From these estimates we may place the California product of 1895 at 7,600,000 boxes, and the American consumption at 4,000,000 boxes.

With these facts in view, is it not well for those who now contemplate planting raisin vineyards to pause and consider, and study well the future of the industry? It is evident that the market must be relieved in some way by exportation, or the consumption increased by a reduction in price, which will place the raisins of California on the market as a staple article of food. The shipment of green fruit to the Eastern markets would also possibly reduce the surplus to some extent. It is the opinion of many that the relief will come from increased consumption. Raisins, as used now, are a luxury, and are not found upon the tables of the poor. As a luxury, the consumption will not increase in any ratio much in excess of the increase from 1884 to 1890, mentioned above, for the reason that a rise or fall of 2 or 3 cents per pound would in any way affect the consumption of raisins among the people who are now using them.

It is before the poorer classes that raisins must be placed as a staple article of food, at a price which will attract them. As a food nothing can be more nutritious than a raisin or dried grape. There is a small quantity in growing raisins at 3 cents per pound, stemmed, and put up in boxes ready for market. This would place the raisins of California at the disposal of the people of the East at a price lower than any other dried fruit, and no other fruit is so valuable as a food. When the raisins of California are so introduced, there can be no doubt but that the consumption will be wonderfully increased, but to what extent remains to be seen. This is a point which every man who now contemplates planting

a raisin vineyard should carefully consider. In any event, it will take time to develop this market.

I believe that my estimate of the crop of 1895—7,600,000 boxes—is conservative, for the reason that it is based on an average yield of three tons of green grapes per acre, and it is a well authenticated fact that crops of ten tons per acre are not at all uncommon from Muscat vineyards in the San Joaquin Valley.

With a crop of 7,600,000 boxes—4,000,000 boxes of which we may count as consumed—we have a surplus of 3,600,000 boxes, or 3,600 carloads, to dispose of as cheap goods in 1895. No grower in planting a vineyard expects to average less than five tons of grapes per acre, and if these expectations are realized, the surplus of 1895 would be 8,500 carloads. These goods will come into competition with low-grade Valencia raisins. The tariff of course cuts a most important figure in the future of this industry. Should it be reduced, the result can but be disastrous.

It is a common assertion that we have the world for a market for our raisins, but this claim is disputed. At the present time we could possibly market a few fancy goods in England, but the quantity would not in any way be perceptible in the general market. It must be remembered that when foreign raisins are driven out of America, they must find a market somewhere else, and if put upon the market of England, which is already supplied, a heavy fall in prices must result, which would make it impossible for our growers to compete with them. Furthermore, no country of Europe, except Great Britain, consumes any great quantity of raisins.

Prices for raisins in California, for the next few years, will probably be good. As long as prices are kept up, planting will continue. What the result of this indiscriminate heavy planting will be remains to be seen, and it must be remembered by those who are now planting, that every additional 10,000 acres of good Muscat vines means an additional 1,000,000 boxes of raisins to be disposed of.

Foreign competition in our home market cannot be ignored. The raisin vineyards of Spain are very productive, and are all in bearing. Their crops will continue to be harvested and placed upon the markets of the world at a cost to the producer considerably below the cost of producing in California. Furthermore, our 2½-cent duty is partly offset by the following fact: that freight on the foreign raisins to New York is about 7 cents per box of twenty pounds, and the cost of packing about 3 cents, while the freight on California raisins is about 35 cents per box, and the cost of packing 15 cents per box. The duty on the foreign raisins being 2½ cents per pound, would give our producers an apparent advantage of 10 cents per box in New York.

In the above report, I have endeavored to place before the public the bare facts covering the present state of the raisin industry. The statistics of acreage are absolutely correct, and my estimate of the crop of 1890 is as near correct as possible. The full returns will not change it 100,000 boxes one way or another. It does not include 500 carloads of dried grapes shipped during the past season.

It is necessary to the future of the industry that these facts become generally known, and being known, it is for each individual to decide whether or not to engage in the industry.

APPENDIX.

The following statistics are taken from Prof. Gustav Eisen's very valuable work, "The Raisin Industry," recently published. Reports of Valencia raisins from 1850 to 1889, according to English estimates:

Year.	England.	America.	Other Places.	Total Tons.
.....	9,423	165	.....	9,588
.....	8,491	235	787	9,563
.....	8,844	320	.....	9,164
.....	7,883	99	70	8,053
.....	7,206	296	50	7,552
.....	7,464	736	85	8,285
.....	8,909	.....	12	8,921
.....	9,485	.....	.....	9,485
.....	13,542	654	182	14,378
.....	9,546	163	113	9,822
.....	7,257	2,831	454	10,542
.....	8,072	63	143	8,278
.....	7,564	.....	238	7,900
.....	12,290	125	100	12,515
.....	8,655	38	182	8,875
.....	9,863	362	12	10,237
.....	12,735	402	473	13,611
.....	12,701	668	177	13,546
.....	14,293	3,095	794	18,182
.....	8,434	1,857	25	10,316
.....	10,060	2,210	110	12,380
.....	12,578	5,210	625	18,413
.....	15,677	4,088	535	20,300
.....	10,796	2,960	710	14,466
.....	13,724	5,513	439	19,676
.....	12,568	6,590	595	19,753
.....	15,272	3,816	676	19,764
.....	15,231	9,525	1,244	26,100
.....	13,026	8,977	892	22,895
.....	17,507	10,169	969	28,625
.....	18,121	21,593	1,732	41,346
.....	19,644	16,722	3,983	40,349
.....	10,210	9,686	4,289	24,185
.....	10,250	9,397	3,596	23,243
.....	15,194	15,687	6,113	36,994
.....	16,648	18,831	3,479	38,958
.....	15,524	12,245	4,655	32,424
.....	12,000	14,645	4,724	27,369

Exports of Malaga raisins from 1864 to 1889:

Year.	United States.	British Col'ies.	Great Britain.	France.	North Europe.	South America.	Sun-dries.	Total Boxes.	Total Tons.
1864..	879,794	45,906	258,458	137,379	59,659	109,741	209,000	1,200,000	13,200
1865..	879,794	75,708	269,072	171,743	64,319	96,658	255,000	1,800,000	19,800
1866..	907,305	72,208	220,756	178,862	62,076	115,305	191,000	1,750,000	18,200
1867..	966,724	96,124	166,737	129,391	58,222	116,762	135,000	1,670,000	16,300
1868..	1,053,726	125,407	222,426	163,306	64,262	103,082	215,000	1,950,000	22,400
1869..	767,321	58,265	175,602	117,612	84,472	67,634	80,800	1,350,000	14,800
1870..	1,331,937	120,039	216,015	90,103	57,637	113,755	270,000	2,200,000	24,200
1871..	1,147,633	98,817	183,916	161,123	69,800	87,242	274,000	2,200,000	24,200
1872..	1,325,705	95,024	383,890	230,046	72,788	119,042	---	1,920,000	21,100
1873..	1,368,822	45,495	241,325	196,239	99,424	---	140,000	2,500,000	27,300
1874..	1,320,000	43,400	240,000	200,000	99,500	---	---	2,160,000	23,300
1875..	976,000	42,000	271,000	203,000	98,000	---	98,000	1,670,000	18,300
1876..	1,321,000	52,000	357,000	276,000	115,000	---	91,000	2,252,000	24,772
1877..	1,250,000	56,600	250,000	300,000	100,000	---	---	2,200,000	24,200
1878..	1,182,088	58,242	194,471	330,787	99,661	98,429	211,000	2,180,000	23,300
1879..	1,146,288	30,598	237,659	368,420	107,888	63,688	170,000	2,125,000	23,372
1880..	1,115,101	46,717	174,126	297,412	108,222	75,466	197,000	2,015,000	22,165
1881..	1,043,727	31,730	141,415	251,382	101,828	81,196	147,000	1,800,000	19,800
1882..	967,571	38,431	176,349	277,253	130,646	98,007	178,000	1,200,000	13,200
1883..	---	---	---	---	---	---	---	---	---
1884..	---	---	---	---	---	---	---	---	---
1885..	---	---	---	---	---	---	---	---	---
1886..	---	---	---	---	---	---	---	---	---
1887..	---	---	---	---	---	---	---	850,000	9,350
1888..	---	---	---	---	---	---	---	850,000	9,350
1889..	120,000	---	---	---	---	---	---	750,000	---

Production and distribution of Smyrna raisins from 1844 to 1884, according to the United States consular reports:

	Tons.
1844.....	8,000
1868.....	19,000
1871.....	46,000
1872.....	31,000
1879.....	76,000
1881.....	49,000
1884.....	95,000

According to English estimates the raisin crop of Smyrna only reached twenty-seven thousand tons in 1876, and was divided as follows:

	RED RAISINS.	Tons.
Chesme	---	5,100
Vourla	---	5,000
Yerly	---	2,800
Carabourna	---	1,600
		14,500
	SULTANAS.	Tons.
Chesme	---	7,400
Vourla	---	3,100
Yerly	---	1,150
Carabourna	---	800
		12,450
Grand total		26,950

This crop was distributed as follows:

	RED RAISINS.	Tons.
Land	---	2,699
of Europe	---	6,488
and Turkey	---	2,250
		2,995
		14,442
	SULTANAS.	Tons.
Land	---	7,945
of Europe	---	1,525
etc.	---	2,820
		285
		12,575
Grand total		27,017

The world's raisin production in 1889:

	Tons.
France	125,000
Greece	120,000
Spain	28,000
Italy, Calabria, and Pantellaria	15,000
California	10,000
Algeria	8,000
Madagascar	5,000
etc.	1,000
	312,000

The above does not include dried wine grapes from Italy, California, Algeria, nor any raisins made in Victoria (Australia).

[In viewing these figures it must be remembered that the products of Greece and Smyrna are principally currants, sultanas, and dried wine grapes.—George West.]

Statement showing the quantity and value of currants and raisins imported and entered for consumption in the United States from 1873 to 1878:

Year Ending June 30th.	Raisins.		Currants—Zante and all Others.	
	Quantity—lbs.	Value.	Quantity—lbs.	Value.
1873.....	35,271,312	\$2,292,948 83	14,141,797	\$566,386 49
1874.....	36,419,922	2,544,605 95	19,319,191	752,694 00
1875.....	30,501,316	2,443,155 50	19,334,458	771,384 56
1876.....	32,221,065	2,425,277 14	20,911,061	856,425 62
1877.....	32,419,637	2,109,333 60	17,152,664	749,488 00
1878.....	32,931,736	1,904,866 13	17,941,352	776,827 00

Statement showing the quantity and value of currants and raisins imported and entered for consumption in the United States, with rates of duty, etc., from 1879 to 1888:

RAISINS.

Year Ending June 30th.	Quantity—Pounds.	Value.	Rate of Duty per Pound.	Am't of Duty Collected.	Additional and Discriminating Duty.
1879	38,523,535	\$1,943,941 14	2½ cents.	\$963,088 42	302 51
1880	39,542,925	2,274,763 00	2½ cents.	988,573 19	48 43
1881	39,654,755	2,711,771 74	2½ cents.	991,368 95	80 50
1882	43,779,867	3,260,033 74	2½ cents.	1,094,496 71	—
1883	51,487,389	3,495,599 45	2½ cents.	1,287,184 77	20 70
1884	56,676,658	3,543,916 15	2 cents.	1,133,533 15	42 70
1885	39,778,695	2,728,847 46	2 cents.	795,573 90	247 55
1886	37,999,306	2,782,599 76	2 cents.	759,986 12	50 00
1887	40,660,603	2,297,469 30	2 cents.	813,212 06	34 00
1888	40,340,117	2,098,503 00	2 cents.	806,802 32	30 00

CURREANTS—ZANTE AND OTHERS.

Year Ending June 30th.	Quantity—Pounds.	Value.	Rate of Duty per Pound.	Am't of Duty Collected.	Additional and Discriminating Duty.
1879	17,405,347	\$520,831 07	1c per lb.	\$174,053 47	—
1880	18,007,492	600,603 40	1c per lb.	180,074 92	—
1881	21,631,512	845,773 00	1c per lb.	216,315 12	—
1882	32,592,231	1,388,886 00	1c per lb.	325,922 31	—
1883	31,171,171	1,247,504 00	1c per lb.	311,711 71	—
1884	32,743,712	1,220,575 16	1c per lb.	327,437 12	—
1885	25,534,507	723,415 00	1c per lb.	255,345 07	—
1886	22,623,171	744,784 00	1c per lb.	226,231 71	\$117 50
1887	29,196,393	1,062,326 00	1c per lb.	291,963 93	—
1888	30,636,424	1,176,532 76	1c per lb.	306,364 24	—

Respectfully submitted.

GEORGE WEST,
Commissioner for the San Joaquin District.

SUPPLEMENTARY REPORT.

STOCKTON, CAL., August 16, 1892.

Since my last report there has been no material change in the condition of the viticultural interests in this district.

In San Joaquin County little interest has ever been taken in vine growing, although the vineyards now planted produce large crops, which have always commanded fair prices, and have yielded returns much more remunerative than grain. This is especially true of table grapes, which can always be relied upon to produce \$100 per acre at present prices. There seems no immediate danger of overdoing this branch of the industry, although the market will always be uncertain and fluctuate with the fruit crop of the East. All table grapes will produce a good neutral brandy, and consequently will be in demand at the wineries in years of depression at approximately the same price paid for low-grade wine grapes.

There has been no increase in the acreage of vines in San Joaquin County.

Stanislaus County planted quite an area in raisin grapes in the winter of 1890-91. The same may be said of Merced, Tulare, and Kern

Counties, while it is probable that 10,000 acres of Muscats were planted in the winter of 1890-91. It is only fair to estimate that the plant of 1892 would no more than offset the acreage of older vines abandoned and those planted on poor lands.

Fresno County is, of course, the leading grape-growing county of the district.

The business of growing wine grapes in this county has suffered with the general depression throughout the State. The wine market presents a remarkable spectacle of increased consumption, decreased production, and low prices. This state of affairs cannot long exist, and a reaction is sure to come.

The vintage of 1891 in Fresno was very large, and the prices were satisfactory. The coming vintage will be relieved by the drying of a considerable amount of wine grapes.

Contrary to my expectations the prices received by the raisin growers for their crop of 1891 were hardly satisfactory. The crop of 1892 was severely damaged by coulure—so severely indeed as to amount to an almost total loss of the fruit crop in many of the young vineyards. In consequence of this, and also of the general shortage of the fruit crop in the East, the prices for the year 1892 will be highly remunerative. This fact, however, should not induce extension of the acreage devoted to the cultivation of the Muscat grape, for there is nothing in the present outlook to justify the venture. By far the largest part of the vineyards of the valley are not yet in bearing, and will at the next good season produce a crop so unwieldy as to completely demoralize the whole industry, unless steps are taken to provide all possible outlets and to vastly improve the facilities for handling the crop. One of the most serious features of the whole situation is the competition of the cheap currant, now admitted into this country free of duty. Immense quantities of these currants are dumped on the markets of New York at prices which we cannot meet—especially with labor costing \$1 50 per day against European labor costing about 20 cents per day.

Those growers who have established brands will always be in position to command better prices for their goods than those who are compelled to sell to the packers.

The disposition of the second-crop Muscats is a matter worthy of the most serious consideration. A yield of one ton per acre of second-crop grapes from the raisin vineyards of Fresno and Tulare, when in full bearing, will produce an aggregate tonnage appalling to contemplate. It is conceded by all growers that the drying of this second crop will in a few years be out of the question. What can be done with them? There will be thousands upon thousands of tons to dispose of. During the summer a great deal has been said about converting these second-crop grapes into wine and brandy, but the amount which could be so consumed would not in any way affect the aggregate production of grapes. The wine market is, has been, and will be fully supplied by the vineyards planted in wine grapes, and the wineries will naturally handle the Muscats that can possibly be marketed. So much can be used, so no more; and an attempt to force any large amount of Muscat wine or brandy into consumption would result simply in depressing the market so that there would be no profit left. The flavor of the Muscat is very pronounced, and is much admired by some people.

However, to the general public it is unknown, and to cultivate the public taste will take years. If some means could be devised for making neutral grape spirit from the second-crop Muscat, the whole question would be solved, for a very large amount of such spirit could be exported.

The making of table syrup is a matter which should be investigated by the raisin growers of Fresno. Such a syrup, condensed under a vacuum, would present a beautiful appearance, and would be an article which could possibly be exported. There are several methods of producing this syrup. I have devoted considerable attention to this matter, and carried out a line of experiments with Mr. H. S. Lord, of Hartford, Connecticut, which demonstrated that an article could be produced pleasing both to the eye and to the taste. There would be a large market for such a product as a temperance fruit drink, and also as a syrup for general table and household use. There is also another process owned by the Yaryan Company of Toledo, Ohio. These should both be investigated by the raisin growers of the San Joaquin Valley. There may be some methods in use in the South which would be practical here.

I have in this report made no attempt at the compilation of statistics, total production, importations, consumption, etc., but shall in my next report give as close estimates as possible for the years 1891 and 1892.

I am aware that the publication of reports and statistics of the general tenor of my report of 1890 is not popular with the people who own large tracts of land which they would like to subdivide and sell, but in closing I would state that the opinions I have advanced are backed by the most practical growers of California.

Respectfully submitted.

GEORGE WEST,
Commissioner for the San Joaquin District.

REPORT OF E. C. PRIBER,

Commissioner for the Napa District.

NAPA, December 22, 1890.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I hand you herewith reports and statistics of Napa County collected by A. Warren Robinson. I am glad to see that the statistics of Napa County have been collected with a great deal of care, and hope that all of my reports will prove quite satisfactory.

Yours truly,

E. C. PRIBER.

E. C. PRIBER, Viticultural Commissioner for the Napa District:

DEAR SIR: I beg leave to submit the following viticultural report for Napa County, as per your instructions and blanks furnished November 18, 1890.

I have made a very thorough canvass of the county, and am confident the statistics gathered are as complete as possible. Not that every vineyard has been enumerated, for there are in several out-of-the-way localities small vineyards that it was almost impossible to find. But I have taken much pains to cover most of the ground, and have done the very best I could.

Napa County is preëminently the home of the vine, and vineyards are to be found in almost every section joining one another, scores in number in some localities, in others scattered. Consequently in gathering statistics considerable labor and much time were required in riding through valleys, in out-of-the-way glens, and upon rough hillsides; for though the main vineyard belt lies in Napa Valley, between the towns of Yountville and St. Helena, numerous vineyards of greater or less extent are located upon the more elevated hillsides or table-lands.

Between the towns above mentioned the valley is covered with a solid vineyard, so to speak, extending not only over the lower level land, but way up on the slopes of the bordering hills, both on the east and on the west sides. In the vicinity of Calistoga, and above that town in the direction of Knights Valley, there is a large tract of vineyard, as well as on the hills to the west of the town named.

Not much attention is paid to viticulture in Pope Valley—there being in that section but fifteen or twenty small vineyards—owing probably to the expense of transporting grapes and wine over Howell Mountain to the town of St. Helena.

On Howell Mountain there are several fine vineyards, planted eight or ten years ago on virgin soil, from much of which the primitive forest has recently been removed.

Within the narrow confines of Conn Valley and upon the hillsides at hand, there are many vineyards and several wine cellars, and

in Chiles Valley also; although in the latter locality vineyards are not numerous.

In Foss Valley and on the adjacent hills there are but few vineyards. In Berryessa Valley none to speak of, of any extent. Wooden, Gordon, and Capelle Valleys have but few vineyards, though vines bear well. According to returns from Gordon Valley, near the Solano County line, south of Napa City, few vines are cultivated. Very few vines are found in the Suscol district. To the west of Napa City, towards Sonoma, there are several vineyards, the majority of which are not to be classed among the larger ones of the upper Napa Valley.

Throughout the entire county the principal varieties of grapes raised are Zinfandel, Riesling, and Chasselas (Golden and Fontainebleau). These varieties are to be found in almost every vineyard, as they are esteemed to be among the best for wine making. In many vineyards finer foreign varieties that have been found excellent for wine making are grown. For instance, Mataro, Sauvignon Vert, St. Macaire, Burgundy, etc.

The acreage of table grapes in the county is exceedingly limited. Malvoisies have been rated under the head of wine grapes, as, for the greater part, they have been sold to wine makers; in fact, comparatively few Malvoisies are now raised. Very few Muscat, Tokay, or other varieties of table grapes have been shipped from Napa Valley this year, though a few carloads have been sent East.

The yield of grapes this season has varied in different localities. Some vineyards bore larger crops than their owners anticipated early in the season. There were no extensive killing frosts in the spring, no severe blighting winds, and little hot weather later in the season to injure grapes to any great extent. Other vineyards yielded but moderate crops, causes for which will appear farther on.

A few vineyards—and but few—received little or no care during the entire season, the owners having been discouraged by reason of the low prices for grapes that have ruled during the last three or four years. Nearly every wine cellar in the county has been the scene of activity during the vintage, and the cooperage has, for the most part, been filled. Fermentation has progressed favorably, the new wine is being racked off, and what now is of the most interest to cellarmen is the price they will obtain for their output.

The price for grapes has ruled higher this season than for several preceding years, varying from \$12 to \$22 per ton, according to variety.

In certain localities the deadly phylloxera is rapidly making inroads, and some of our fairest vineyards are gradually succumbing to the attacks of this insatiable pest. In fact, this disease is widespread, and bids fair to materially change the viticultural outlook in the course of a few years. In many vineyards diseased vines are being uprooted, their places being supplied with resistant stocks, or in other cases, where the small vineyardist cannot afford the expense of the long time of waiting, the ground will be planted to grain crops or to orchard. Resistant have done well, and those vineyardists who have got them are pleased with their success.

There are numerous thrifty vineyards where the phylloxera has not appeared that yield excellent crops.

Very few new vineyards have been planted this season, for various reasons. Should the new wine bring good prices, probably it would

several persons to plant new vineyards another season, or to large those already planted.

In conclusion, I find that there are in the county:

Number of vine growers of five acres or more.....	619.
Total acreage in vines.....	18,229 acres.
Total acreage in bearing vines.....	17,003 acres.
Amount of grapes raised in 1889.....	54,361 tons.
Wine made.....	4,252,800 gallons.

Much reluctance was manifested upon the part of some vineyardists to give any statistics, while others absolutely refused, they evidently thinking that by giving the information sought their business would be injured to greater or less extent. However, on the whole I have been courteously received.

I have obtained at most of the cellars in the county the amount of wine made this season; from several cellarmen I could not get figures. The amount given 500,000 gallons might be added. To the tonnage of this season might be added 300 tons.

But it must be borne in mind that much of the new wine will be distilled. In fact, considerable of it is now being made into brandy, and there will be a loss in racking off. The yield will probably exceed that of 1889.

This completes my report. I hope it will prove satisfactory. I have done my best to make it so.

Respectfully submitted.

A. WARREN ROBINSON.

SUPPLEMENTARY REPORT.

NAPA, CAL., September 3, 1892.

To the Board of State Viticultural Commissioners:

GENTLEMEN: The two years that have elapsed since my last report have brought no changes in the general situation of the wine industry in my district.

By the ravages of the phylloxera and the neglect of some vineyards crops have continued to decrease, till our production has fallen from 4,000,000 to 2,000,000 gallons, which is the estimate for this fall's crop. As much as the present condition of our industry is to be deplored, we have gained some very valuable experience by the depression. The phylloxera began with its destruction in the lower valley. A large portion of the vineyards destroyed are those which produced heavy crops, but not of the finest quality, and in consequence the average quality of Napa wines is far better to-day than it has been in previous years. It is exceedingly gratifying that with all the depression in the market the best brands of Napa wines are not only well known, but demanded and asked for all over the United States, and even in foreign countries, at respectable prices. It is a pleasure for me to state that the method to introduce in the market special brands in bottled wines has been followed by a great many of our best wine producers, with a success which can easily be perceived by the increased demand. Napa is, without question, the wine district of the State which has the largest number of well-equipped cellars. More of the wine makers now know

how to discriminate between the different qualities of wine, and, as is shown by the statistical figures given below, distilled during the fiscal year of 1891-92 from a remarkably small vintage more wine than in the previous year, solely to avoid placing on the market wines that were not absolutely sound and of good quality.

The confidence of our vintners in the ultimate success of their efforts to produce the wines for the world, is best illustrated by the lively interest they show in the coming World's Fair at Chicago. Fourteen vine growers of Napa have applied for space, and intend to compete for prizes at the World's Fair, and naturally expect a larger demand and better prices for their wines when they once become better known and appreciated.

Whenever the reaction sets in (and some signs are perceptible that a change in the market is near at hand) our wines will command prices which will encourage the grower to replant with resistant vines his hill vineyards which the phylloxera has destroyed. The necessity of protecting or renewing them has prompted the vine growers to look into the possibilities of how best to save or replant these vineyards. A committee of vine growers, headed by Mr. E. P. Palmer, has obtained very valuable information about the different vines and soils, and grafting best adapted for them; and I can only repeat here what I have stated in my former reports, and always urged in the meetings of our Commission: that the vine growers should be entitled to an earnest support from our Commission in their fight against this terrible disease. I hope that the recently manifested disposition of our Board to act in the matter will soon take a positive form; and I would recommend most earnestly the establishing of experimental stations in different localities, and thereby save the vine growers costly experiences in making the experiments.

Through the courtesy of Collector Byington, of the Fourth District, I received the following official figures on the manufacture of brandy and sweet wines in Napa and Solano Counties during the last two fiscal years:

BRANDY PRODUCTION.

Napa County.

By 32 registered distilleries, from May 1, 1890, to April 30, 1891.....	205,093 gallons.
By 31 registered distilleries, from May 1, 1891, to April 30, 1892.....	275,705 gallons.
Increase last year	70,612 gallons.

Solano County.

By 6 registered distilleries, from May 1, 1890, to April 30, 1891.....	4,781 gallons.
By 5 registered distilleries, from May 1, 1891, to April 30, 1892.....	28,744 gallons.
Increase last year	23,963 gallons.

SWEET WINES.

Napa County.

From August 1, 1890, to April 30, 1891.....	131,651 gallons.
From August 1, 1891, to April 30, 1892.....	148,203 gallons.
Increase last year	16,552 gallons.

Solano County.

From August 1, 1890, to April 30, 1891.....	None.
From August 1, 1891, to April 30, 1892.....	72,399 gallons.
Increase last year	72,399 gallons.

Through the courtesy of Collector Quinn, of the First District, I learn that in Contra Costa County five registered distilleries produced the following amount of brandy:

.....	3,996.73 gallons.
.....	11,178.86 gallons.
.....	4,053.87 gallons.

Respectfully yours,

E. C. PRIBER.

REPORT OF F. A. WEST,

ON THE POSSIBLE SALE OF BRANDY AND CONCENTRATED MUST TO
EASTERN WINE MAKERS.

STOCKTON, December 10, 1891.

To the Board of State Viticultural Commissioners:

GENTLEMEN: After the revision of the sweet wine regulations was completed in Washington last June, I visited, in accordance with your instructions, the principal wine-growing districts of New York and Ohio, with a view of investigating the possibilities of opening a market for California brandies to be used in fortifying sweet wines free of tax, and I regret to say that from the information gained in personal interviews with the wine growers, and in correspondence since my return from the East, there would seem to be no prospect of opening such a market, unless the methods of manufacture employed in the East be changed. There is a very large amount of sweet Catawba manufactured in New York and Ohio, and also a considerable quantity of Port. These wines are clean, sound, and wholesome, but owing to the fact that some cane sugar is used in their manufacture, they cannot be classified as "pure sweet wines," as defined in the Sweet Wine law, and are consequently not eligible for fortification with grape spirits free of tax. It would seem that the Eastern growers could avail themselves of the law by fermenting the pure juice of the grape as low as possible under the law, then adding the extreme limit of spirits, withdrawing from the fortifying-room and sweetening with cane sugar or concentrated must, as preferred. Whether or not this would produce as good a wine as is produced now by the New York and Ohio growers I do not know, but I can see superficially no objection to such a course, and I can see no reason why such a method of manufacture could not be profitably adopted.

In any event, these wines will continue to be made and fortified with grain spirits, and the market will not be open to California until some change is made in the methods of operation. Under the present law the use of condensed must, *unless produced by the party who offers the same for fortification*, is precluded. Hence, this market is also shut out, although I believe many of the Eastern growers would use California condensed must if it were properly presented to them. Several men informed me that they had made satisfactory experiments with samples, but had not taken much interest in the matter because they were doing very well as they were. There is a very general opinion among all the Eastern growers that a concerted move should be made by the California and Eastern men against the adulterators in large cities. The use of cane sugar in a limited amount by the legitimate wine growers of the East, cannot be considered in any sense an adulteration, because their wines are as pure as ours, and we Californians would find in the Eastern growers our strongest allies against our worst foes, and would find them ready at any time to unite with us in any measure which would lead to this end.

Respectfully submitted.

FRANK A. WEST.

REPORT OF WILLIAM C. SPENCER,

ON THE USE OF ALTERNATING ELECTRICAL CURRENTS IN THE TREAT-
MENT OF WINES.

SAN FRANCISCO, June 5, 1891.

Mr. CLARENCE J. WETMORE, *Manager Experimental Cellar, Board of State
Viticultural Commissioners, San Francisco:*

DEAR SIR: I herewith desire to report on the experiments which have been carried on under your supervision in your cellar since May 5, 1891, relating to the application of the alternating electric current for the purpose of clarifying and sterilizing wines. My first experiments date back to July, 1890; but at the beginning of this year I received information from France which proved that experiments of the same nature, involving the same principle, had been carried on in Burgundy and Bordeaux with results worthy of note, and confirming ours. Trying to obtain information, to avoid useless and expensive experiments, from the inventor, Mr. M. de Meritens, a distinguished electrician in Paris, I received a reply, in which he stated that he had as yet made nothing public on this subject.

The apparatus necessary for applying this process consists of:

- I. A source of electricity (alternating).
- II. A receptacle for holding and treating the wine, preferably made of a non-conducting material of even diameter, and lined with two suitable electrodes at each end on the inside of said receptacle.
- III. Suitable devices for carrying the "alternating electric current" from its source to the electrodes.

With such an arrangement, the wine under treatment is acting as a conductor of electricity, and forms part of the circuit. Having been obliged to adapt myself to existing conditions, and no alternating current being at hand, I devised a small apparatus for converting the direct current (which is in use at 317 Pine Street for lighting the building) into an alternating current, with the special advantage of making it possible to have alternations from two up to any number of thousands per minute.

The rate of alternations in the following experiments was 2,000 per minute; the electro motive force about 75 volts; the current from two to three amperes; the quantity of wine, 10 gallons, contained in a ten-gallon barrel, the two heads of which were lined with carbon on the inside, connecting with the outside by means of ordinary binding posts, to which were attached the wires conveying the alternating current.

There is absolutely nothing secret nor patented about this process, and I hold myself ready to give such information as will be of use.

May 5th—Sweet Sauterne 4½ hours, marked No. 1.....Acidity measured May 27th, 4.50.
May 6th—Sweet Sauterne 9 hours, marked No. 2.....Acidity measured May 27th, 4.50.
May 8th—Sweet Sauterne 9½ hours, marked No. 3.....Acidity measured May 27th, 4.50.
Original—Sweet Sauterne No. 0.....Acidity measured May 27th, 5.00.
(Packages marked Nos. 1, 2, 3, 0, were opened eight different times to take samples.)
Original—Sweet Sauterne (never opened but once).....Acidity measured May 27th, 4.50.

May 12th—White wine 9 hours, marked AH1.....	Acidity measured May 27th, 7.0
May 14th—White wine 15 hours, marked AH2.....	Acidity measured May 27th, 7.0
May 18th—White wine 10½ hours, marked AH3.....	Acidity measured May 27th, 6.5
Original—Marked AH0.....	Acidity measured May 27th, 7.0
(Packages marked AH1, AH2, AH3, AH0, were opened five different times to take samples. Wine undrinkable.)	
May 23d—Claret 9 hours, marked No. 1 (no original for comparison).....	Acidity measured June 4th, 6.5
June 3d—Claret 7 hours, marked No. 2.....	Acidity measured June 4th, 6.5
Original—Claret marked No. 0.....	Acidity measured June 4th, 6.5

I desire to state that the work carried on has been of the most primitive kind, for want of electrical apparatus and other accessories, and am confident that when the properties of this process are thoroughly understood and properly applied it will be of great benefit for clarifying, destroying ferments, and even aging California wines.

I wish to extend my thanks to the Commission for the courtesy and assistance given me while carrying on these experiments, and in particular to Mr. Chas. A. Wetmore, who has furnished the wine operated on.

Respectfully submitted.

WILLIAM C. SPENCER.

PROGRESS REPORTS OF WINFIELD SCOTT, SECRETARY.

FIRST REPORT.

Read at the meeting of the Board held June 8, 1891.

SAN FRANCISCO, June 8, 1891.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I beg leave to submit my first annual report as your Secretary. The routine business of this office has increased to a very considerable extent since the first of last July, at which time I entered upon the position. The correspondence has more than doubled in volume, and now extends to every country where the grape is cultivated. This has been carefully attended to, as has all the other routine business pertaining to the office.

Several special inquiries and works have also been carried out. The first special work was the preparation of the last annual report, and at the same time a table of tariffs for all the civilized countries of the world was hastily compiled and added to the report as an appendix. When the report of the Commission was published the copies were distributed in the ordinary manner, entailing a labor of itself of some weeks.

In the meantime the Executive Committee had authorized the compilation of a new Directory of the Grape Growers and Wine Makers of the State. While this work did not immediately devolve upon me, all the county reports as filed had to be rewritten and the names arranged alphabetically for publication. At the request of one of the Commissioners, the compilation of one district was turned over to Mr. Clarence J. Wetmore and myself, and this was attended to under our immediate supervision. I am happy to state that though there have been many unforeseen and unavoidable delays in the compilation of this Directory, it is now ready for publication, and awaits the approval of the Board of Examiners before being sent to the State Printer.

Supplementary to this will be published a partially complete directory of the grape growers and wine makers east of the Rocky Mountains. This has been collected entirely by correspondence, and includes about 3,000 names, each with Post Office address, acreage, and whether each man is a wine maker or not, forming an invaluable supplement to our California list. This work has been conducted entirely by myself.

While thus engaged, I set about collecting a mass of material which may be of use at a later date in the preparation of a work on distillation. Everything which could bear upon the manufacture of fruit brandy has been preserved as collected, and the material will be of value should the Commission decide upon publishing such a work as I shall propose.

I have also made a complete collection of the Pure Wine laws of the various States and Territories, or of the anti-adulteration laws bearing on the sale of adulterated liquors. Wherever possible I have secured

copies of all State laws bearing on the liquor problem, merely as a matter of reference. The same course will shortly be pursued with the cities and towns of California, in all of which the license question is daily becoming of more importance, and constantly affects to a greater degree the interests of the wine trade and producers.

The publications of the Commission are in constant demand. One demand, however, which we have not yet met is in supplying some reliable printed work on the distillation of brandy. This is the greatest need of the Commission, so far as printed matter for distribution is concerned.

I would most earnestly recommend that the Commission undertake the publication of a book on brandy distillation, and distribute it at the earliest possible moment. The subject is one of growing importance, and the relative importance of the brandy to the wine interest is yearly augmenting in favor of the brandy. The work should be begun at once, our literature being thus far singularly deficient in this branch of the industry.

Anticipating a trifle on the action of the Commission, I have partially completed the translation of the latest German work on distillation, which was first examined and pronounced well worth translation and publication by Commissioner Priber. This book I can translate and place before the one who is intrusted with preparing the Commission's publication. As an instance of the interest felt in brandy production, I desire to state that when this book was announced, and before its merits were known in this Commission, I had, in another connection, between forty and fifty inquiries as to where it could be procured.

Mr. W. H. McNeil, the Clerk, has continued the scrap-books begun some years ago, and added greatly to their value during the past year. He has rendered me constant and valuable assistance in other work.

Respectfully submitted.

WINFIELD SCOTT,
Secretary.

SECOND REPORT.

Read at the meeting of the Board held December 18, 1891.

SAN FRANCISCO, December 14, 1891.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I beg leave to submit my semi-annual report to your body.

Since the last meeting of the Board the routine business of the office has been attended to with all reasonable promptness. The annual report of the Commission for 1890 has been received from the State Printer, as well as the new Directory of the Grape Growers and Wine Makers of California and the East, and both have been distributed.

The library has been re-catalogued, and is now, for the first time in three years, in good working shape. Several valuable additions have been made by purchase and gift, the most notable addition, probably, being the "Ampelographie Française," by Victor Rendu. There have been additions of many French and German works, and more are soon to arrive.

herewith submit the correspondence in relation to the Indefinite Period bill, which is now in shape to be introduced at the present session of Congress, and which will soon be introduced by Representative McKenna. The bill is approved by the leading representatives of the legitimate whisky and rum distillers, and will have their hearty support. For reasons which are not necessary to state here, the correspondence was carried on by me in another capacity. All of the correspondence, however, is at the service of the Board.

I respectfully ask that at this meeting appropriate resolutions be passed, to be sent to Washington for use there. I have already been promised the support of all the leading commercial bodies of the State, and there should be some appropriate action taken by the San Francisco Wine Dealers' Association.

The publication of a book on the distillation of brandy is one of the certainties of the near future. There are to be chapters on the history of distillation in California, which I am now preparing, with the assistance of Messrs. DeTurk, West, and Haraszthy, with appropriate statistics from its infancy; chapters on the best varieties of grapes for the manufacture of brandy, and on the stills used in the State; a chapter on the possible foreign markets in Germany and England, by Edward Walden, who is known by name at least to the members of the Board, and who has kindly consented to give the producers of the State the results of the efforts of his house to introduce brandy into the foreign markets; chapters on distillation in France, by Charles A. Wetmore; being portions of his letters from Cognac and Jarnac many years ago, with a running set of notes and observations, which will embody his experience since then; and the whole will conclude with a translation of Antonio dal Piaz's work on brandy distillation, which has already been submitted to Commissioners West and Priber, and pronounced a most valuable work. The complete work will be ready to go to the State Printer, from present indications, about the first of the year.

The translation of a work by Antonio dal Piaz, on "The Utilization of Wine Residues," will be begun as soon as the book can be obtained from abroad. Especial reference will be paid to that part relating to the manufacture of cream of tartar. This will be published supplementary to the treatise on the same subject now under preparation by Professor Rising.

I have also under way the translation of Valery Mayet's "Les Insectes de la Vigne," which is said to be the most complete and practical work of the sort yet published. It is pronounced a most valuable book for the grape growers.

The statistics of wine shipments and production are kept accurately, I attending in person to this duty. I have been relieved, as before, from the duty of maintaining the scrap-books, etc., through the kindness of Mr. William H. McNeil.

Respectfully submitted.

WINFIELD SCOTT,
Secretary.

THIRD REPORT.

Read at the meeting of the Board held June 13, 1892.

SAN FRANCISCO, June 13, 1892.

To the Board of State Viticultural Commissioners:

GENTLEMEN: My annual report will be short, much of the work of the year having been covered in the semi-annual report which was submitted to you at the last meeting, in December, 1891.

The regular work of the office has been carried on as usual, and has been heavier than I have ever known it before. I have had some assistance in this matter from Mr. McNeil, and some from outside sources, and everything about the office is in splendid working condition. All of the valuable viticultural matter which has been collected in past years in the scrap-books has been indexed, and is now easily available for reference. Much time has been spent on the statistics of production and export of wine and brandy, and this feature of the office work has been most carefully attended to.

During the past half year the work on brandy distillation has been prepared for publication, published, and distributed. I do not need to state how well it has been received by the wine makers and distillers; that is already known to you.

In the latter part of May there was held the Viticultural Convention, the proceedings of which are now ready for publication. These will form part of our next annual report, which will be made up, as far as known, as follows:

Report of the President, with statistics.

Reports of Commissioners.

Report of Chief Executive Officer Wetmore.

Report of Secretary Scott.

Report of William C. Spencer on the use of alternating currents in treating wine.

And the several appendices.

It will be noticed by reference to Professor Rising's report that his work on cream of tartar making will soon be ready. Everything else on the list is ready for publication, with the single exception of the reports of Commissioners. I am informed that all of our report must be at the State Printer's not later than July 1st to insure publication within a reasonable time before January, 1893, and for this reason these reports should be forthcoming as early as possible.

I am still engaged in the translation of Valery Mayet's work, "Les Insectes de la Vigne," but progress is slow on account of press of other matters.

I would most respectfully call your attention to the Raines bill, just introduced into Congress, a copy of which is herewith given, and which appears to call for definite action by this Board:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the provisions of sections forty-two, forty-three, forty-four, forty-five, forty-six, forty-seven, forty-eight, and forty-nine of the Act entitled "An Act to reduce the revenue and equalize duties on imports, and for other purposes," approved October first, eighteen hundred and ninety, shall, on and after the first day of August, eighteen hundred and ninety-two, be so extended that any producer of sweet wines, as defined in said Act, may, under such regulations and official supervision, and upon the execution of such entries and the giving of such bonds, bills of lading, and other security

the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall prescribe, withdraw distilled spirits from any distillery warehouse or bonded warehouse, free of tax, in original packages, in any quantity not less than ten wine gallons, and may use so much of the same as may be required by him, under such regulations, and after the filing of such notices and bonds, and the keeping of such records, and the rendition of such reports as to materials and products, and the disposition of the same, as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall prescribe, in fortifying the pure sweet wines made by him, and for no other purpose, in accordance with the limitations and provisions as to amount to be used, and period for using the same, set forth in section forty-two of said Act, and as to the place for using the same, the provision under which it shall be used, and the affixing of stamps, as set forth in section forty-five of said Act; *provided*, that such sweet wine may, before the addition of such spirits, contain less than four per centum of saccharine matter; *and provided*, that pure sugar, as well as distilled spirits, may be added to the wine under the immediate supervision of the officer assigned to supervise the fortification of the wine, and that the quantity of spirits added shall not be limited, as provided by section forty-two of said Act, to the quantity necessary for the preservation of the saccharine matter contained in the wine, unless such quantity shall be in excess of the fourteen per centum and twenty-four per centum limitations fixed by said section.

This is a matter which it seems to me calls for immediate action, and I ask for your authority to take such steps in reference to this bill as you may see fit.

Respectfully submitted.

WINFIELD SCOTT,
Secretary.

MINUTES OF THE BOARD.

SAN FRANCISCO, December 9, 1890.

Minutes of the regular meeting of the Board of State Viticultural Commissioners, held at the office, 317 Pine Street, at 11 A. M.:

The following Commissioners were present: West, Doyle, Bundschu, Blanchard, and President De Turk. The Secretary being absent on account of illness, Mr. C. J. Wetmore was appointed Secretary pro tem.

The minutes of the previous meeting were read. Mr. Bundschu asked that the minutes be corrected so as to show that when his name was proposed for President, he withdrew. The correction was ordered and the minutes were approved.

The monthly report of Mr. Dowlen was then read and ordered placed on file.

Mr. Doyle then offered the following resolutions, which were adopted:

Resolved, That the services of Ethelbert Dowlen be dispensed with after the conclusion of his current month of service, and that the Secretary inform him that after that time his services will not be required by this Commission. The Secretary is also directed to make the same communication to Commissioner Shorb.

Resolved, That the Executive Committee be authorized, if they are of the opinion that Mr. Dowlen's services should be continued for a brief period, to enable him to close pending work, to arrange with him for that purpose.

Chief Executive Officer Wetmore then made the following recommendations:

First—That the influence of the vine growers should be exerted in municipal and county organizations to cause a practical discrimination to be made between licenses imposed upon public places devoted mainly or wholly to sales of liquors by the glass, and stores, groceries, restaurants, and hotels, where no saloons are maintained; and that the vine growers should demand that where their products are sold under ordinary trade methods in places where no consumption is permitted on the premises, no license tax should be imposed other than such as is imposed on other classes of merchandise.

Second—That immediate steps should be taken to perfect a system of exhibiting our viticultural products, after the general plan of the exhibit in San Francisco, in the principal cities east of the Rocky Mountains, and especially in the city of New York.

The recommendations were referred to the Executive Committee, with power to act.

The selection of a Chief Executive Officer then came up. Mr. Wetmore stated that if the members of the Board had any one in view for the place, he was willing to resign; or if they wished him to keep the office, he would do so without pay.

Mr. Blanchard then offered the following resolution, which was adopted:

Resolved, That Mr. Charles A. Wetmore be continued as Chief Executive Officer of the Commission; but, at his own suggestion, without a salary, leaving the compensation to be paid for any services hereafter performed by him, and for which compensation should be paid, to be fixed by the Board.

The meeting then took a recess until 2 P. M.

On reassembling at 2 P. M., Commissioner Stephens was present, as well as those present in the morning.

The minutes of the meeting of the Executive Committee held since the last regular meeting were read, and the actions taken by the committee were approved.

Mr. Doyle then offered the following resolution, which was adopted:

Resolved, That Messrs. George West, J. DeBarth Shorb, and I. DeTurk be a special committee to study the question of treasury regulations under the recent Sweet Wine regulation of Congress; that they be directed to associate with themselves persons practically engaged in the manufacture of fortified wine, and with their assistance present their views to the revenue and treasury authorities as those of this Commission.

Mr. West called attention to the report that the Distillers' Trust was endeavoring to fight the Sweet Wine bill in Congress. On motion, the Chief Executive Officer was instructed to take such action in the matter as he thought best.

The meeting then adjourned.

C. J. WETMORE,
Secretary pro tem.

SAN FRANCISCO, June 8, 1891.

Minutes of the annual meeting of the Board of State Viticultural Commissioners, held at the rooms, 317 Pine Street, at 11 A. M.

The meeting was called to order by President I. DeTurk.

Present: President DeTurk, Commissioners Doyle, West, Priber, Bundschu, and Blanchard, also Chief Executive Officer Wetmore, Manager R. J. Wetmore, and the Secretary.

The minutes of the meeting of December 9, 1890, were read, corrected, and approved.

The minutes of the meetings of the Executive Committee from December 9, 1890, until June 8, 1891, were read, and the following resolution offered by Mr. Blanchard and seconded by Mr. Bundschu was adopted:

Resolved, That the action of the Executive Committee from December 9, 1890, to June 8, 1891, be approved as recorded in the minutes.

Chief Executive Officer C. A. Wetmore presented his annual report,* and supplementary to it his analysis of the Sweet Wine law. On motion of Mr. Doyle the same was received and placed on file, and the Secretary was instructed to prepare the same for immediate publication by the State Printer, and also furnish copies to the newspapers.

Mr. Doyle then offered the following resolution, which was duly seconded, designed to carry out the recommendations of the Chief Executive Officer relative to the use of concentrated and boiled must and high-proof brandy by the Eastern sweet wine makers:

Resolved, That the Chief Executive Officer be directed to prepare at once a circular pointing out to Eastern wine makers the advantages of using concentrated must and high-proof brandy for their purposes in preference to glucose, spirits, and other inferior materials, and that the same be published and widely disseminated among Eastern wine makers.

The resolution was unanimously adopted.

Manager C. J. Wetmore then presented his annual report* and financial statement, both of which were received and ordered placed on file.

On motion of Commissioner Doyle, seconded by Commissioner Blanchard, Mr. William C. Spencer was employed, at a salary of \$60 per month,

This will be found in the regular reports of the officers, printed elsewhere.

to continue the experiments on wine with the alternating electric current, and report on the same to the Board.

Recess was taken until 2 p. m.

On re-convening, Commissioner Doyle was absent, but as a quorum was in attendance, the business was proceeded with.

The annual report* of Secretary Scott was read and placed on file. A supplementary report was made by the Secretary, verbally, relative to the policy of the Board on the proposed Indefinite Bonding bill.

On motion of Commissioner Priber, seconded by Commissioner West, the Secretary was directed to use the influence of the Commission, and direct his own efforts in favor of an indefinite bonding period for brandy and whisky.

On motion of Commissioner West, seconded by Commissioner Blanchard, the following resolution was adopted:

Resolved, That the Chief Executive Officer be and he is hereby directed to begin at once the preparation of a thorough and exhaustive work on brandy, and that the same be published at the earliest possible day.

Commissioner Bundschu made a statement to the effect that the Interstate Commerce Commission would meet in San Francisco in the course of a few days, and that the Commission should take action looking to a further reduction on overland rates on wine and brandy, and especially on return packages.

A general discussion followed, every one warmly commending the suggestion, and, on motion of Commissioner Blanchard, seconded by Commissioner Priber, Commissioner Bundschu and the Secretary were appointed a special committee of two to prepare a memorial on the subject and lay it before the Interstate Commission.

The further management of the Anaheim disease investigation was brought up by the Secretary, and after an informal talk it was decided that all matters and communications pertaining to the subject should be referred to Commissioner Shorb.

The communication of the United States Department of Agriculture, asking for a report on wine and brandy adulteration, was, on motion of Commissioner West, referred to Prof. W. B. Rising, the State Analyst, for a separate report.

A communication was read from the City Board of Trade, relative to the entertainment of Warner Miller, President of the Nicaragua Canal Co., while he was in the city. President DeTurk appointed C. J. Wetmore to represent the Commission in the matter.

The election of officers was then declared in order, and before any nominations were called, the following letter was read:

SAN FRANCISCO, June 8, 1891.

To the Board of State Viticultural Commissioners:

GENTLEMEN: At your meeting to be held to-day, the election of officers for the ensuing year will require action on my office. Permit me to withdraw any supposed candidacy for reelection should such be contemplated.

With sincere appreciation of the uniform courtesy with which I have been treated in the past, and grateful acknowledgments of the honors that have been conferred on me, I desire to sever my official connection with the Commission, trusting that in the future its work will be as valuable to the public, and even more so, than it has been in the past.

Respectfully,

CHAS. A. WETMORE,
Chief Executive Officer.

*This will be found in the regular reports of the officers, printed elsewhere.

Nominations for President were then declared in order. Mr. West nominated Mr. Shorb. Mr. Priber renominated Mr. DeTurk. Mr. DeTurk withdrew in favor of Mr. Shorb, and on motion of Mr. Blanchard the rules were suspended, and a unanimous ballot was ordered cast for Mr. Shorb.

Nominations for Vice-President were declared in order. Mr. Blanchard nominated Mr. West, and, on motion, the Secretary was ordered to cast a unanimous ballot for Mr. West.

Nominations for Treasurer were declared in order. Mr. Priber renominated Mr. Doyle. On motion of Mr. Blanchard, the rules were suspended and a unanimous ballot ordered cast for Mr. Doyle.

Nominations for Secretary were declared in order. Mr. West renominated Mr. Scott. On motion of Mr. Blanchard, the rules were suspended, and the President instructed to cast a unanimous ballot for Mr. Scott.

Nominations for Chief Executive Officer were declared in order. Mr. West nominated Mr. C. J. Wetmore, and on motion of Mr. Blanchard, the rules were suspended, and the Secretary was instructed to cast a unanimous ballot for Mr. Wetmore.

On motion of Mr. Bundschu, duly seconded, the office of Manager of the Hall and Experimental Cellar was abolished.

Mr. Blanchard offered the following resolution, which was unanimously adopted:

Resolved, That the thanks of this Commission be and the same are hereby tendered to Mr. DeTurk, our outgoing President, for his able, impartial, and gentlemanly conduct in presiding over this Commission in the past, and that we realize the fact that he has been and is an indispensable factor in the efficiency of this Commission.

Mr. Blanchard then offered the following resolution, which was adopted unanimously:

Resolved, That this Commission fully realizes and appreciates the valuable and indispensable services of Mr. Charles A. Wetmore, our outgoing Chief Executive Officer, and, with some acknowledgment and recognition of his value to us, we hereby tender to him our thanks, and acknowledge ourselves, and the State, through us, under lasting obligations to him.

On motion of Mr. Priber, seconded by Mr. Blanchard, Mr. C. A. Wetmore was voted his salary as Chief Executive Officer for the past half year.

Adjourned.

WINFIELD SCOTT,
Secretary.

SAN FRANCISCO, June 15, 1891.

The following communication was received this day:

SAN GABRIEL, CAL., July 12, 1891.

WINFIELD SCOTT, Secretary Board of State Viticultural Commissioners, San Francisco:
DEAR SIR: I hereby appoint Commissioner George West of the San Joaquin District, Mr. DeTurk of the Sonoma District, and G. G. Blanchard of the El Dorado District to the Executive Committee, and Commissioner Charles Bundschu of the San Francisco District as Auditing Committee of the Board of State Viticultural Commissioners.

Very respectfully yours,

J. DEBARTH SHORB,
President.

WINFIELD SCOTT,
Secretary.

SAN FRANCISCO, June 22, 1891.

The following communication was received this day:

SAN GABRIEL, CAL., June 13, 1891.

Mr. WINFIELD SCOTT, Secretary Board of State Viticultural Commissioners, San Francisco:

DEAR SIR: I beg to submit the names of the honorable Commissioners as members of the standing committees of this Board, in addition to those already named on the Executive and Auditing Committees:

Finance—Commissioners Rose, Doyle, and Priber.
Vine Pests, etc.—Commissioners West, Priber, and DeTurk.
Distillation, etc.—Commissioners DeTurk, West, and Bundschu.
Table Grapes—Commissioners Stephens, West, and Rose.
Experimental Cellar—Commissioners Priber, Bundschu, and Doyle.
Anaheim Disease (by request)—Commissioner Shorb.
World's Fair—Commissioners Doyle, Priber, Blanchard, DeTurk, and Stephens.

(Signed:)

Very truly yours,

J. DEBARTH SHORB,
President.WINFIELD SCOTT,
Secretary.

SAN FRANCISCO, December 14, 1891.

Minutes of the meeting of the Board of State Viticultural Commissioners, held at the office of the Board, 317 Pine Street.

In the absence of President J. DeBarth Shorb, the meeting was called to order by Vice-President George West.

Present: Commissioners West, Doyle, DeTurk, Stephens, and Priber.

The death of Hon. George G. Blanchard, Commissioner for El Dorado District, was announced, and on motion of Commissioner Doyle, the following resolution was adopted:

Resolved, That we have learned with deep regret the death of Commissioner George G. Blanchard, a member of this Board from its inception; that the Secretary be directed to express to the family of the deceased our sympathy with them, and our sense of the loss which the public has sustained in the decease of a most useful and devoted public officer; and that out of respect for his memory the Commission do now adjourn until Thursday, the 17th instant, at 11 A. M.

Adjourned.

WINFIELD SCOTT,
Secretary.

SAN FRANCISCO, December 17, 1891.

Minutes of the meeting of the Board of State Viticultural Commissioners, held at the office of the Board, 317 Pine Street, at 11 A. M.

Present: Commissioners West and Priber.

No quorum being present, the Board adjourned until Friday, December 18th, at 11 A. M.

WINFIELD SCOTT,
Secretary.

SAN FRANCISCO, December 18, 1891.

Minutes of the meeting of the Board of State Viticultural Commissioners, held at the office of the Board, 317 Pine Street, at 11 A. M.

Present: Commissioners West, DeTurk, Doyle, and Priber.

No quorum being present, the Board adjourned to the call of the Chair.

WINFIELD SCOTT,
Secretary.

SAN FRANCISCO, January 14, 1892.

Copy of telegram received this day from Hon. J. DeBarth Shorb, President of the Commission:

SAN GABRIEL, CAL., January 14, 1892.

Mr. WINFIELD SCOTT, Secretary Board of State Viticultural Commissioners, San Francisco: I hereby appoint Commissioner Chas. Bundschu as member of Executive Committee, in place of Mr. Blanchard, deceased.

J. DEBARTH SHORB,
President.WINFIELD SCOTT,
Secretary.

SAN FRANCISCO, June 13, 1892.

Minutes of the meeting of the Board of State Viticultural Commissioners, held at the office of the Board, 317 Pine Street, at 11 A. M.

Present: Commissioners West, DeTurk, Towle, Bichowsky, Priber, Bundschu, and Doyle. Absent: President Shorb and Commissioner Stephens.

Vice-President West presided.

The minutes of the December meetings were read and approved.

The minutes of the meetings of the Executive Committee held since the December, 1891, meeting, were read and approved.

The semi-annual report* of Chief Executive Officer C. J. Wetmore was read and placed on file.

Regarding the suggestion that the Viticultural Café be discontinued, which appeared in Mr. Wetmore's report, considerable discussion ensued. Mr. Doyle favored continuing the café, and others were for dropping this feature of the work of the Commission. It was stated that the present lease would run until July 1, 1893. Finally, on motion of Mr. Bundschu, the Chief Executive Officer was instructed to ascertain from Mr. James G. Fair's agent whether he would be able or willing to cancel the lease before that time; further action was left with the Executive Committee.

The progress report* of Prof. W. B. Rising, who is investigating cream of tartar making, was received and placed on file.

The report* of Secretary Scott was received and placed on file.

On motion of Commissioner Bundschu, the Secretary was instructed to prepare a new schedule of the tariff of the countries of the world, to be published in the next annual report.

Regarding the bill of Congressman Raines to amend the Sweet Wine law, after a thorough discussion, it was resolved to prepare a telegram to be sent to Senator Felton and the California delegation in Congress, protesting against the bill.

Recess was then taken till 2 P. M.

On reassembling the following telegram was reported by the Secretary, and was ordered sent immediately to Washington:

SAN FRANCISCO, June 13, 1892.

Hon. C. N. Felton, U. S. Senate; Hon. T. J. Geary, Hon. A. Caminetti, Hon. John T. Cutting, Hon. E. P. Loud, Hon. W. W. Bowers, House of Representatives—California Delegation in Congress, Washington, D. C.:

The Board of State Viticultural Commissioners, at the annual meeting held to-day, learned that a bill has been introduced by Congressman Raines, and is now pending in the House, to amend Sections 42 to 49 of the Revenue Act of October 1, 1890.

*These will be found in the regular reports of officers, printed elsewhere.

This is that part of the McKinley bill usually called the Sweet Wine law. The Raines amendment permits the use of corn or other spirits for fortification, permits the fortification of dry wine, and the addition of sugar. The effect of this bill, if passed, will be destructive to the viticultural interests, and open the door to the manufacture of fraudulent wine and endless stretching of wines. Every effort of the delegation should be exerted to resist its passage. Letter to follow.

(Signed:)

GEORGE WEST,
President.
WINFIELD SCOTT,
Secretary.

The semi-annual report* of William H. McNeil, Cashier and Storekeeper, was received and placed on file.

Election of officers was then declared in order. A letter was first read from Mr. Shorb declining reelection as President, on the ground of ill health, and thanking the Commissioners for their many acts of courtesy in the past. The Secretary was directed to prepare a suitable answer to Mr. Shorb's letter.

Nominations for President were declared in order. Mr. Priber nominated George West. There being no other nominations, the Secretary was instructed to cast the unanimous ballot for Mr. West.

Nominations for Vice-President were declared in order. Mr. DeTurk nominated Chas. Bundschu. There being no other nominations, the Secretary was instructed to cast the unanimous ballot for Mr. Bundschu.

Nominations for Treasurer were declared in order, and the names of Mr. Doyle and Mr. Priber were presented. Both declined, and a ballot was taken which resulted: Doyle, three; Priber, three. Both again declined, and presented the name of Mr. Towle. On motion, the rules were suspended, and the Secretary was instructed to cast a unanimous ballot for Mr. Towle.

For Secretary, the name of Mr. Scott was presented. On motion of Mr. DeTurk, a unanimous ballot was cast by the Commission for Mr. Scott.

For Chief Executive Officer, Mr. Bundschu nominated Mr. C. J. Wetmore, and, on motion, the Secretary was instructed to cast a unanimous ballot for Mr. Wetmore.

The matter of planting experimental plots of resistant stocks in various sections of the State was brought up. It was deemed best that this should be done, so that hitherto untried varieties and hybrids could be tried and tested. On motion of Mr. Doyle, the Chief Executive Officer was authorized, in conjunction with the Executive Committee, to take such steps in the matter as were deemed proper.

President West announced the following standing committees:

Executive—Bundschu, Priber, and DeTurk.

Auditing—DeTurk.

Finance—Shorb, Towle, and Doyle.

Vine Pests, etc.—Bichowsky, Priber, and Stephens.

Distillation, etc.—DeTurk, Shorb, and Priber.

Table Grapes, etc.—Stephens, Towle, and Doyle.

Experimental Cellar—Doyle, Priber, and Bundschu.

Anaheim Disease—Shorb and Bichowsky.

World's Fair—DeTurk, Stephens, Bundschu, Bichowsky, and Shorb.

WINFIELD SCOTT,
Secretary.

* This will be found in the regular reports of officers, printed elsewhere.

APPENDICES.

[APPENDIX A IS BOUND SEPARATELY.]

APPENDIX B.

TRANSACTIONS OF THE EIGHTH ANNUAL VITICULT-
URAL CONVENTION.

HELD AT IRVING HALL, SAN FRANCISCO, MAY 18 AND 19, 1892.

TRANSACTIONS OF THE EIGHTH ANNUAL VITICULTURAL CONVENTION.

The World's Fair Viticultural Convention was called by Clarence J. Wetmore, Esq., Chief Executive Viticultural Officer, in accordance with a resolution passed at a meeting of the Executive Committee of the State Viticultural Commission. It was held at Irving Hall, No. 139 Post Street, San Francisco, on May 18th and 19th. The purpose was to bring together all persons interested in all branches of viticulture, so that some definite plan might be adopted for making a grand viticultural exhibit at the World's Columbian Exposition.

FIRST DAY'S PROCEEDINGS.

SAN FRANCISCO, May 18, 1892.

In the absence of President J. DeBarth Shorb of the Commission, I. DeTurk, Esq., acted as Chairman, and Winfield Scott, Esq., acted as Secretary.

The Chairman called the meeting to order, stating the objects of the meeting, and then introduced M. H. DeYoung, Esq., World's Fair Commissioner from California.

M. H. DEYOUNG: Mr. Chairman and gentlemen, I received an invitation from your Secretary to come before you and give you some idea of the World's Exposition, to be held in Chicago in 1893. In treating this subject we will take it up in three branches: the object, the scope, and the benefits to be derived.

Strange as it may seem, there have been only eight International Expositions held in the history of the world. The first one was held in London in 1851, and was the idea or creation of the Prince Consort, the husband of Queen Victoria. Compared with modern or recent date Expositions it was a small affair. The entire Exposition held in 1851 could be placed in one of the buildings of the contemplated Chicago Exposition. The total number of exhibitors was only seventeen thousand, while in Chicago we assume there will be between sixty and seventy thousand.

All the World's Fairs, even when they have not proved pecuniary successes, have greatly promoted industry in the countries in which they have been held. The object is to increase the old and open up new avenues of employment, and they thus greatly add to the wealth of the nation in which the Exposition has been held. The effect of our Centennial Exposition in Philadelphia was very marked. Shortly after 1876 great improvements were made in many departments of manufacture, and entirely new industries were started in this country. The most noticeable thing in this connection was the impetus given to the manufacture of artistic articles. Prior to 1876, we, as a rule, made only the commoner varieties of articles. After 1876 our artisans, seeing how

much ahead of us other nations were in elegance of finish and artistic design, profited by the example, and now we are in many lines rivaling the best manufactures of the Old World. It is not only the material benefits that flow from Expositions that benefit a nation. They are great educators. They bring within the reach of many that broad and liberal education which some of our greatest authors have said can only be obtained by travel. International exhibitions bring the whole world to us. Instead of compelling us to travel over the whole world to see its best features, they come to us in a compact form, so that a busy man may see in a few days more than he could in years of travel.

A World's Fair teaches the people of the country in which it is held what their real resources are. Naturally the home country puts forth its best efforts; it shows what can be done in every line of industry and in arts and sciences, and the visitor is thus enabled to gather and absorb information which the perusal of a library of statistical volumes could not furnish him.

A World's Fair inspires the respect of rival nations. A country like the United States, pursuing a policy of peace, is apt to be underrated by the people whose attention is called only to rival nations upon a war basis. It is only on an occasion such as we are about entering upon that attention is drawn to our capabilities, and our critics are brought to a realization of the fact that though peaceful, we may, like the slumbering lion, be awakened.

We need not fear comparison with previous World's Fairs. As all those of the world were eclipsed by the World's Fair of Paris, in 1889, so will that of Chicago eclipse all others in 1893.

Now let us get some idea of the extraordinary scope of the Chicago Exposition in comparison with others. I will give you some comparisons, taking the Exposition of 1889 in the departments which were greatest, and based on that you can form an idea of what an immense, startling, and wonderful Exposition the one in Chicago will be.

The Paris Exposition covered 96 acres of ground; the one in Chicago in the main park alone covers 633 acres of ground, and the Midway Plaisance, as it is called, will add 200 acres more, making an aggregate in the neighborhood of nearly 900 acres, or nearly ten times as much as the Paris Exposition. The buildings in the Paris Exposition covered a space of 75 acres; that is, there were 75 acres roofed. In the Chicago Exposition the main buildings alone will cover 115 acres; that is, leaving out the sheds and ground that will be covered with live stock, which will be over 40 acres more. In addition to the main buildings there are the buildings representing the Asiatic countries, the buildings erected by our State, buildings erected by other States, and the buildings erected by other nations. In all, we assume there will be nearly two hundred buildings on that ground; so, taking this in comparison, you can see how we expect to excel, so far as space is concerned. The Paris Exposition labored under great disadvantages, because the great nations of the world refused to recognize it. Germany did not exhibit there; England refused; Belgium refused, and Italy, and so on. To-day we have favorable reports from sixty-four nations, each and every one of which propose to exhibit in Chicago. England in making application sent two Commissioners, who applied for 220,000 square feet; it was granted, being intended to cover England, Ireland, Wales, Scotland, and the other dependencies. The first thing we knew they were selling that

over in England at so much a square foot, and refused to give it to their colonies, and even refused to allow Ireland to have it. Now, we have had direct information that these colonies and Ireland want space. I only tell you this to show the great interest they

In a conversation with Sir Henry Dredge, the English Commissioner, when he was here, he said to me: "We propose to make the very best exhibition we have ever made. We understand the circumstances, and this is our life blood. We don't propose to be outdone by the American manufacturers. We propose to let the people in American and other markets see that England can still manufacture, and manufacture as well as America. We propose to hold our trade, and we propose to get more of it if we can." That goes to show, I think, the interest the people of England are taking. In Germany they have applied for a very large space, and will spend a million and a quarter of dollars. Mr. Wermuth went back to Germany, and then wrote for more space, which we were unable to give him. If we granted all the space which foreigners apply for, we would not be able to give any to our own exhibitors. Australia called for an enormous space, and all we could give her was one tenth of what she wanted.

I thought to be our aim, then, to show people the capabilities of California. This we can best do by competing in every industry in which we have made progress. We should put our best efforts alongside of what the world can show in each department. In the vast building devoted to mines and mining, we should show what we have taken from the earth in the form of minerals, and how we have taken it. Our improvements in mining machinery should be exhibited. Specimens of our minerals and our building stones should be displayed, the latter in the rough and also worked into forms calculated to show their beauty and adaptability to the purposes of architecture.

In all the great buildings described California should be represented, and especially in the Horticultural Building, where the viticultural interests will be exhibited. The display should be made in such a way that when the distribution of prizes and medals is made we shall have our fair share of honors. Not only for this reason should we anxiously strive to make a showing in the big buildings, but because the visitor to the Fair whose time is limited will naturally confine his sight-seeing to the main attractions, and will be forced to give the State buildings no attention. Therefore, unless we are fully represented in the great departments, we shall miss much valuable advertising. Thus a man might wander through the Mines and Mining Building, should we omit to exhibit there, and not learn that California is still a great mining State; and through the Forestry Building without dreaming that we have valuable forests of timber.

But this will not prevent our having a comprehensive display in our State Building which will fully illustrate in a compact form all our resources. In that building we can show in a correct manner all that we are capable of doing, all that we propose to do, as well as that which we have accomplished. The competitive exhibits in the great building will not interfere with this at all, but on the contrary they will only serve to stimulate the curiosity of many visitors who would have otherwise ignored our State Building. The man who sees in Horticultural Hall a

fine display of California flowers will be stimulated to hunt for further information, and naturally he will seek it in the California building.

Now, for the scope of the Exposition. This Exposition is divided into twelve great departments, and, as you have probably read, commences with the Department of Agriculture. Then comes the Department of Live Stock. In speaking of this department I want to call your attention to one other thing, and that is, there never was an Exposition in the history of the world that had the scope of the Chicago Exposition, and will take in displays that were never before covered in such a manner. I do not know of an International Exposition in the history of the world that ever had a live stock show. This live stock show will cover forty acres of buildings, with fifty-six acres of land. There are offered in cash premiums \$150,000. I do not know of an Exposition in the history of the world where Horticulture was made a separate and distinct department, with a separate and distinct great building. I do not know of an Exposition where the Agricultural Department was so great and comprehensive that it had to be housed in three buildings—one building for the plants and forestry, another for the dairy, and another for the fisheries. This is the first Exposition where a large building was erected for the fish and fishery products and the apparatus of fishing. This is the first Exposition that made a great Department of Mines and Mining, erected a great building to house the exhibit and supply the necessary motive power, and to place everything connected with mining in one building. And then we have another novelty in the department called the Department of Transportation. This department is my own suggestion, and I take great pride in it. The Department of Transportation will show everything used in the world to transport human beings or merchandise by land, sea, or air, and with that scope you can understand, will include locomotive exhibits, car exhibits, cable cars, street cars, electric cars, wheel-barrows, etc., with models of everything ancient and modern in the way of transportation appliances that are known; in fact, taking in everything that we have ever heard of, and going back into ancient history and presenting models of old vehicles, some of which are being built especially for this purpose, so as to show what man has used in the past for transportation. These will be housed in another magnificent building, which I will describe to you later on.

Then another innovation is the Electrical Building. It must be understood that in other Expositions electrical appliances were exhibited, but they were not arranged in great departments with special buildings. In Paris they were exhibited in the Machinery Hall, but here a magnificent building is to be built for that purpose.

I will proceed to give you some idea of the buildings. [Here Mr. DeYoung used the designs and plans for the purpose of illustration.]

You see here a picture of the general plan of the Exposition. You see before you what is known as Jackson Park. It has a frontage of one mile and a half on the lake front. Part of it was cultivated, and the rest was swamp. They have started in to grade a series of canals, the excavations running through the ground, and in grading they have made three artificial isles. Here is where the canal commences. You notice here is a great lagoon; it is 1,400 feet long and 700 feet wide, and it has an arm running up here between the Agricultural Building and the Machinery Hall. It then passes between the Electrical Building and the Manufactures Building, and passes what is known as the

Wooded Island; the island is not to have any buildings on it at all, but will be used for raising and cultivating flowers and plants. It will have half a million narcissus and half a million other flowers, making a perfect bed of flowers, which will be put out at different times, so as to have some of them in bloom all the time. An exhibit of roses will also be made on this island. The canal passes all around the Wooded Island, passes down towards the Illinois Building, and then to the Art Building. The artist takes a little license with this picture. The waterways are a little over three miles in length, and the intention is to have these canals used as a means of the conveyance of guests. There will be over five hundred boats, gondolas, etc., on the water, so that you can wander all around the grounds as you desire. An artificial bay will be constructed, and will be inclosed all around and protected from the storms of the lake, so that the boats can come out into the main lagoon, and be perfectly protected. At the entrance of this lagoon you will see a statue. It is emblematic of Liberty and our country. This statue will be 90 feet high. At the other end of this lagoon there is to be a great fountain constructed, the cost of which will be \$50,000. The main parade will be 70 feet wide, and we propose to make an exhibit of California trees around it.

We now pass to a description of the buildings.

The first building on the grand square will be the Agricultural Building. This is one of the most magnificent structures raised for the Exposition. With its annex, it is to be 1,300 by 828 feet. On either side of the main entrance—you cannot see it here—Corinthian columns 40 feet high and 5 feet in diameter are placed. Passing through these columns you come to the main vestibule, which will be filled with statuary illustrative of the agricultural industry, and, in fact, everything connected with the building will be magnificent. Over the entrance there will be a mammoth dome 130 feet high.

Immediately behind the Agricultural Building comes the Forestry Building, 500 feet long by 200 feet wide, and constructed of rustic. A colonnade surrounds the exterior, the columns of which are made from trees contributed by the various States. California has contributed three; they are taken from the trunk, 25 feet high, and placed there exactly as they grew, with the bark and everything. The sides of the building are made of rough slabs with the bark removed, and the roof is thatched with tan and other bark. In fact, it will be very beautiful. Within this building will be a sawmill in complete running order. Close to the Forestry Building will be an annex of the Agricultural Building—the Dairy. This building will contain a model dairy with a collection of all its products.

Passing from the Agricultural Building we come next to the Machinery Hall, with its annex. The latter is connected with Machinery Hall by a colonnade, or series of columns. This is one of the finest buildings, architecturally, in the Exposition. If you will look at the front you will get some conception of it. This building will cost \$1,200,000 to erect. The interior is spanned by three arched trusses, or girders, numbered one, two, and three. The size of this building, with its annex, which we are contemplating erecting, is 1,300 feet long by 990 feet wide. Under each of these arches there will be a traveling crane, which will be used in putting the machinery in its place, and when the Exposition is opened will be used as a means of showing the visitors the exhibits. The

cranes move up and down, and will carry from two to three hundred people at each time.

I will cut this a little short; there are a great many details.

A VOICE: No, go on.

MR. DEYOUNG (continuing): The next building that we come to is what is known as the Administration Building. Architecturally, this is the handsomest building on the ground. It is intended to be. Its usefulness was laid aside for its beauty. It has a central dome 250 feet high, and this will be magnificently ornamented in gold. This building will cost \$450,000. The interior features even exceed in beauty and splendor those of the exterior, and the exterior is magnificent. Between every two of the grand entrances, and connecting the intervening pavilion with the great rotunda, is a hall or loggia, giving access to the offices, and provided with broad, circular stairways and four swift-running elevators. Above the balcony is the second story, 50 feet in height, and from the top of this story rises the interior dome 200 feet from the floor. In the center is an opening 50 feet in diameter, giving light. The under side of the dome is enriched with deep panels, richly molded, and they will be filled with sculpture and rich paintings. In size the rotunda rivals, if it does not surpass, the most celebrated domes in the world.

This is the building for the administration and for the public, and is not for exposition purposes. The offices for the administration of the Exposition will be located in this building. In the third story will be the press rooms, where there will be rooms for all the great papers in the country. In the center or lower floor there will be an accommodation room for the public, and it will also be a meeting place.

Behind this building are the railroad depots, with eighteen tracks running in.

Returning to the extreme end of the square, and going to the other side of the Agricultural Building, we come to what is known as the Manufacturers' Building; you probably recognize it as the main building of the Exposition. This is undoubtedly one of the greatest buildings ever built for exposition purposes. It also has three arches inside, the center one being 385 feet wide. At the Paris Exposition they had one great building called Machinery Hall, and that was a magnificent building of iron and glass, with a span of 363 feet clear. You could take that machinery building and put it under the center arch of our proposed building and you can lose it. This center arch is an enormous affair, rising 206 feet from the ground, and 385 feet wide. It is a magnificent arch, and on each side are two others 175 feet wide. Entering the main entrance you are met by an avenue 50 feet wide, running straight through the building. Now, you know a great many Exposition buildings are not more than 50 feet wide, but here is an avenue 50 feet wide. The building as originally laid out had this place open instead, and suppressed the dome. When these plans were first presented to our Commission I asked Mr. Burnham what he proposed to do with this open space, which I thought was necessary, and he told me it was for exhibitors. When I returned to Chicago they had taken it for machinery, etc. I figured that the foreign countries, as they exhibited at our Centennial, occupied about eight acres of our building. Admitting that there will be no more nations exhibiting at Chicago, and that they would not need any more space, I found that there would be but four acres

left for the entire American nation, and that was simply ridiculous. When I figured out the results about this building, the managers denounced me and said I was wrong. After making my figures, I asked Mr. Burnham and Mr. Jeffers to figure out exactly what this building contained, and find how many acres there were. Instead of 40 acres, if it were all roofed in, it only contained 30½; but, as a matter of fact, after taking the amount of space for aisles, which I figured at 35 per cent, I found there was not four acres left. They then asked me to go down to the office and explain it. The result was the taking out of these domes and putting in this enormous truss. When I proposed it, the architect said it could not be done, and he sent out for the iron men, who said it could be done. They drew the plans and submitted them to the Chicago Board of Commissioners, and they adopted them. The result was an increase in expenditure of \$400,000. Notwithstanding the size of that building, which is a mile around the outside, and a third of a mile across, they haven't room enough. The building is intended to house manufactures and the liberal arts. The main entrance to this building is 40 feet wide.

We pass from the great Manufacturing Building to the Electrical Building. They are divided by a canal which is spanned by a magnificent bridge. The electrical display will be the most novel exhibit in the Exposition. We are devoting a great deal of time to it, and working out the most striking exhibit ever had of this character. The minarets on the building are intended to be covered with wires, and at night you will see flashes of light running around in a wonderful and beautiful manner. In addition to this, it is proposed to have a magnificent arch, lighted with a column as large as my body, to be lighted by 20,000 candle-power. The Electrical Building will be 700 feet long and 345 feet wide. Among the many novelties to be produced in this building is a private residence, and everything in this residence will be conducted by electricity, such as cooking and transporting the food to the dining-room, ringing the bells, calling servants, and, in fact, everything will be run by electricity.

Next to this comes the beautiful Mining Building. I have not a picture of it here, but it is to be a magnificent structure. The Mining Building is 700 feet long by 350 wide, and has galleries in it 60 feet wide. The entrance will be faced with marbles of different kinds and hues. In this building will be housed machinery of all kinds for extracting metals of all character and description.

We then come to the grand Transportation Building. This building covers a great deal of ground. The main portion alone is 960 feet long and 250 wide. Behind that there is an annex covering nine acres of ground. The principal and most striking effect of this structure is the entrance. The main arch is in the neighborhood of 56 feet in width, and commences with a series of receding arches. The doors are all covered with gold leaf.

We then come to the Woman's Building, and then to the Fine Arts Building, and next—what you are interested in—the Horticultural Building. One of the most attractive features of the Exposition will be the horticultural display. This mammoth building in which it will be exhibited is to be 1,000 feet long and 250 feet wide, and will cost half a million dollars. The dome is 187 feet in diameter and 113 feet high. An open court is to be put a grove of orange trees from California. In

or under the dome will be a miniature mountain, built upon a framework and covered with rocks and shrubs. At the top will be a fountain, the water making a cascade down the side of the mountain.

In this building will be exhibited your display. Under viticulture we have fourteen classes, which very fully cover all your interests. It will include an exhibit of vines of every kind, grapes, and every variety of wine, and of every method and process of extracting the juice, etc., and it depends upon you to reflect great honor upon California by making a thorough exhibit in every one of these classes. In addition to what I have named, there should be a great deal more exhibited. There should be cooperage, for instance. There was a very bitter fight as to where they should go. I drew my conclusions that they should have their exhibit with California, so that if the coopers happened to go into the viticultural class you could make a combination with them and fill their enormous vats. If it was taken away from California, you would have to bring your own casks. California ought to make a great exhibit of cooperage. I think the largest oak cooper shop in the United States is located in San Francisco. I recollect in Paris they had one cask that held twenty thousand gallons, and it was filled with wine.

The two classes at Chicago were brought together, and so, gentlemen, you have the cooperage in the Viticultural Department, and I hope you will take advantage of it. [Applause.]

Passing from the Horticultural Building, we come to the Woman's Building. This building was designed by a woman, Miss Hayden, of Boston. It is to be 400 feet long by 200 feet wide, and will contain a model hospital, a model kindergarten, and a model kitchen.

From that we pass to the Art Exhibit. This will be in the shape of a Grecian temple, with two annexes. It will be a perfectly fire-proof building of iron, stone, glass, and brick, and will be 700 feet long by 440 feet wide. We have erected a magnificent building, and have applications for more space than we can give.

We next come to a very handsome building, called the Fisheries Building. It is of peculiar shape. If you will look at the plan you will get a better idea than from my description of it. The Fisheries Building embraces a large central structure, with two smaller buildings connected with it on either end by arcades. The extreme length of the building is 1,100 feet, and the width 200 feet. In the central portion is a general fisheries exhibit. In one of the polygonal buildings is the angling exhibit, and in the other the aquaria. The exterior of the building is Spanish-Romanesque. In one of the tanks will be fresh-water fish and in the other salt-water.

In the center of the polygonal building is a rotunda 60 feet in diameter, in the middle of which is a basin or pool 26 feet wide, from which rises a towering mass of rocks covered with moss and lichens. From clefts and crevices in the rocks crystal streams of water gush and drop to the masses of reeds, rushes, and ornamental semi-aquatic plants in the basin below. In this pool gorgeous gold fishes and other fishes disport. From the rotunda one side of the larger series of aquaria may be viewed. These are ten in number, and have a capacity of 7,000 to 27,000 gallons of water each. Passing out of the rotunda a great corridor is reached, where on one hand the opposite side of the great tanks can be viewed, and on the other hand a line of tanks somewhat smaller, ranging from 750 to 1,500 gallons each in capacity. The glass fronts of

the aquaria are in length about 575 feet, and have 3,000 square feet of surface.

As you know, Chicago is an inland city, and has nothing but fresh water. The salt water will be brought from the Atlantic sea-board. It is to be evaporated about one fifth, and brought by the trainload. After getting it to Chicago they will add water from the lake and increase it to its former condition.

Looking at this map I want to say something to you about California, the building, and its location. At the time we were arguing and discussing the location of the State buildings, it occurred to me that I had better make up my mind very quickly where we wanted California's building to be. It is a very hard thing to decide which is the best, and where we cannot get the best place, the question is which is the next best place. I studied this proposition, went out on the ground, and drove all over it dozens of times. My first feeling was to follow Iowa and get on the lake front, which is a beautiful place, especially on a hot day, and convenient for visitors. But I thought we are not going there for the convenience of visitors; we are going there with a determination to show what we have; we don't propose to go there for the convenience of anybody, but we go there with the proposition of putting up a building that everybody can see. There will be so much to see there, the crowds will be so enormous, and they will be all making for the main buildings first, and they will have very little time to go to these other buildings. So I figured it out that if we could get our building where it would be near some attraction, it would be better for us. Instead of picking out a beautiful position where the lake could be seen, I picked out the next most important place, where the crowd would move. In the Midway Plaisance, before mentioned, will be placed all the Asiatic exhibitions, showing the streets of Bagdad, a great mosque, etc. My experience in Paris told me that there was not a human being there who did not go to the Asiatic exhibit. I know that there was not a day that I did not go there to see the dancing girls and the unique show. Now, taking my experience as that of everybody else, I made up my mind that the crowd would pass into this Midway Plaisance. We are right at the entrance of it; there are the different railroad stations, and all that crowd has got to pass there, and they can't pass without seeing the California Building. It is the first building they will see. We have a larger space than any other State in the Union, and we have a still larger space now, because we have absorbed most of Oregon's space. Colorado moves its line up, and its space is added to California. We have now a tract of 680 feet by 250 feet.

Well, gentlemen, I think I have taken up a great deal of your time. I will be pleased to answer any question on any matter of interest from any one of you. [Applause.]

MR. C. A. WETMORE: Before Mr. DeYoung goes away will you kindly tell us whether any arrangement has been made to govern the viticultural exhibits.

MR. DEYOUNG: Owing to the fact that the head of the Viticultural Department has not been appointed, the exact rules for that department have not been made. I don't know why they have made such a long delay in the arrangements of the Viticultural Department, but I think owing to the fight that is going on in Washington about this \$100,000. All the heads of the departments are there. I see General

Davis is there. I think that is the main reason it has not been made. Of course the general rules cover all the departments, but the special rules for the Viticultural Department have not been made.

MR. WETMORE: There is one more question. Has any plan been devised for the appointment of the juries for making the awards?

MR. DEYOUNG: Yes; we have a very elaborate report on the question of awards about the appointment of the thousands and thousands of jurors, but it will not be carried into effect until Congress makes an appropriation. We have asked for \$700,000.

MR. WETMORE: I mean what class of men will be appointed?

MR. DEYOUNG: We have appointed a committee of twelve, known as the Committee of Awards, and on that I am pleased to say—I made quite a fight for it—we have a Californian upon it, Mr. Mark L. McDonald. I think your interests will be well looked out for. The committee of twelve will appoint the juries; each foreign nation will have a representative, and the women will have a representative. The great bulk of the jurors will come from this country, but that has not been formally adopted, although the entire plan has been submitted to the National Committee, and if at any time you want to see it you can have it, but it has not been issued for the general public, and will not be until we have more money. [Applause.]

THE CHAIRMAN: Gentlemen, I have now great pleasure in introducing to you Mr. Charles A. Wetmore. [Applause.]

MR. WETMORE: Mr. Chairman and gentlemen, I have no speech to make and no formal ideas on the affair. I was asked yesterday whether I would say something on the advantages that may be derived from this Exposition. I said, "Yes, I have some ideas on the subject, but I haven't put them in very good shape; I haven't worked them out."

Mr. DeYoung has most ably described what there is in it for Chicago. Chicago is to become the capital of industry in America on account of this fair. All these magnificent buildings will benefit Chicago enormously.

I hear people complaining now. Men—business men—complain that we are going to have dull times in California, for the reason that this World's Fair will draw money away from us.

I think we ought to have a capital of industry in America. We ought to have such a place, and Chicago, I believe, is the best place on this continent for it. There has been no mistake; we can't be better located. Of course Chicago expects to reap enormous profits from it. Every part of the world will contribute something to the city. California will contribute largely, but I don't know any class of people who can be asked to assist in this thing who are less able than our vine growers, and who have reaped less from their endeavors. We are to-day in a bad condition. We are not booming ahead, but are trying to sell out; and it is a practical thing for us to ask, right now, What is there in it for us, and how are we going to benefit ourselves? I believe we were right ten years ago; when we were in our prime of vigor we showed what was possible in viticulture in California. We can go to Chicago and show again; but for the benefit of whom? The real estate men! But can we go and show how to help ourselves? Why, to be sure; we can go to Chicago and establish agencies for selling out our vineyards! [Laughter.] I know there is not a vineyard in twenty on this coast that is not for sale, and we are going not only to provide money, but for

our own good. I know that people are chuckling over the short crops. That is the condition that we are in, if we go to the World's Fair. Yet I believe there is a great advantage in it, and I believe we can reap advantage, if we go about it in the right manner. I believe, if we can get to our coast the right class of men, and show the great organizers of the country the opportunities of California; if we could only get one man such as Armour to take up our claim, I believe we might succeed. I believe in attracting some of these people, and I believe in using this World's Fair in bringing influential men from other States, and I believe we can do that. I believe that in advancing the interests of the vine we advance the interests of California.

That leads to the question how we can best exhibit, and to our greatest profit. I believe that we should center our endeavors in making the State as a whole conduct the thing. I believe we should combine in making a grand display of the wines of the coast, instead of competing with each other. I don't know any one who ever made a dollar out of a World's Fair by his awards, except so far as advertising his goods goes. What we are suffering from to-day is a want of consumers in this State, and more capital to handle our goods, more capital to develop them, and work them, and place them before the public.

I see men all around me who have spent their last cent in building up this industry, and they are now engaged in merchandising. That is one reason there are not more here to-day. We have never had capital enough, and to-day we are in the most abject condition of any industry on the face of the earth. There is no industry that had such hope and such prospects in it that is to-day in such a condition as ours—praying for short crops, and trying to get out of business.

Now, I believe in handling this thing right for the vine growers, trying to see what the producers can get out of it. What does the producer want? He wants more merchants to handle his goods, and compete with each other in obtaining the best prices from the public. I would like to see the time return when the merchants would compete with each other in buying in order to get the best goods. It may be that in going to Chicago we can get them to do that, and I believe the vital question for us is, How shall we exhibit to the greatest advantage? I believe we should do all we can in building up these other industries, in building up the moneyed interests and getting people here, and to show the importance of new railroads to carry our goods, in showing the importance of other carriers in getting our goods to market. A party came in my place the other day, and wanted me to ship a case of wine East for him, and we couldn't do it. The railroad charges as much for one case as for three, and I could have taken two cases and filled them with rocks, and shipped all three for the same price that I would have paid for one. They have got us in the door; that is what is the matter, and they keep us there. [Laughter.] You all know the condition that we are in.

Now, for the World's Fair. Do you want go there, each individual of you, to get a medal? I have got one, but I don't know what use it is to me. I have got it in my window, but it never raised the price of my wine, except perhaps on a little I may have been able to place around the market here. It doesn't raise the price of my wine, nor give me any advantage in its sale. Is that what we are going for? No; we want to attract more people to this coast. We are in the condition of people

living entirely on expectations. We don't want any more advertisements of our horticultural and viticultural products until we get more people at home to use them, and we can have them if there is the right spirit in the State, but we don't have that.

I asked Mr. DeYoung the question, "Has any arrangement been made to govern this department of viticulture?" It cuts an important figure as to who should govern that great building of horticulture, which they put under the charge, I believe, of a commission agent. There was a great effort made to get that under the charge of some one who knew something about it, and it would be a good policy to get some one from this coast, but we can't get any kind of recognition, or get any person that we thought proper to represent us. Are we going to be put in the same boat with horticulture? From the appearance of things, I think we are. I am afraid that we are going to be put in the hands of somebody that don't know what we want, and don't represent us in any way.

I don't know how that will work, so far as our interests are concerned, but we are going to meet Missouri, New York, and Virginia, and they will have five times the influence in the Committee of Awards that we will have. I remember an instance in the Centennial. No one came away from there satisfied. Every little medal had to be fought for. At first they were going to meet and give California no award at all. We can't expect any power in that Committee of Awards in this competition from so many different States, but we can expect recognition for the collective display that is entered in competition, and we can expect some from our State exhibit, and there, I think, is where we should put in our best efforts. It should be in our State exhibit, because we know what we can do there. We know what we are able to do, and the State should be liberal in this matter. I see some of the members of this Commission recognize the fact that there is no industry in the country that needs help so much as we do; they recognize the fact that nine tenths of us are on our last legs, and are being held up by the fellows that we owe something to.

We don't want to boom this State for the men that have lands for sale, but after we have established ourselves satisfactorily we can talk about increasing the acreage. The practical needs are the only needs to talk about.

We don't want to go into this Exposition in a spirit of rivalry. I don't believe in county exhibits; but the counties are all asking for them. I know in Alameda County I was asked to be in favor of them, and I got out of it. We would be but a fly speck against the whole world with that sort of representation. [Laughter.]

In Paris, in 1878, there were seventeen thousand exhibits of wine. It was perfectly enormous; and the only way that we can make a creditable display and attract attention is to make an aggregate showing for ourselves.

Let us remember that we are contending against great difficulties. Let us remember that we are going to Chicago, that great city where they will not put our wines in their hotels. Let us try to get our wines in the hotels. Let us remember that if we could get the hotels to use them that it would be the best advertisement in the world for us, and let us work it so that when we leave Chicago every hotel will have our wines on their tables. A stranger going there finds none of our wines, so let us put them in the hands of an agent. Instead of trying to boom

our lands let us put our wines in the hands of a practical agent. Let us put in our exhibit as a State exhibit; let it be a competitive exhibit, and let the whole State be combined, and let the men who represent us there represent us there also. Let us see if we cannot get somebody at the head of that Viticultural Department who has some interest in us—not simply a desire for a place. Let us see if we are really a free American people. Let us see whether on the four hundredth anniversary of the discovery of America we can show the people in Chicago what we can really do. I think we are going to make a grand display, which will be worthy of us, but I think the men who will be talked about the most and written about the most will be the men who have the biggest interests, and not the men who have the best wines. It will be the men who have the biggest casks, or something of that kind. It may be that prices will revive and we will come back better satisfied; but we must go there in a public spirit to accomplish anything. Then we can win. Let us advertise this State all through; let us do as much to help the miner as we do for ourselves; the more people that get money the better for us who are in business, and we are here for the benefit of the public as well as for ourselves. As Mr. DeYoung says, we want to go there for the benefit of others, and we want to do some good for ourselves, and that is what I counsel you.

I don't want to say any more. Let us work collectively and ask the State body to help and support us all they can to place our goods on the market. [Applause.]

Mr. C. J. WETMORE then announced the programme for the afternoon session.

THE CHAIRMAN: I will appoint as a committee to test the samples of wine which have been submitted, Mr. A. G. Chauché, Mr. J. Mortier, Mr. H. W. Crabb, Mr. F. Beringer, and Mr. F. A. Haber.

Mr. N. J. HAINES then asked that the convention could afterwards sample the wines, in addition to the judges, as it would be a matter of education for those present.

A recess was then taken until 2 p. m.

AFTERNOON SESSION.

The convention was called to order by the Chairman.

THE CHAIRMAN: Gentlemen, the first business will be to hear from the county delegates, and hear what their counties have done toward having representation in the Columbian Exposition. I will first call on Napa County. Has Napa any organization, or do they want to say anything as a county to-day?

Mr. C. J. WETMORE: Mr. Chairman, I think that Mr. Louis Zierngibl, who has charge of this matter, is present.

Mr. ZIERNGIBL: We have had a meeting, but with very little success. We have tried to organize, and for that purpose I went around to see how many members I could get together. I have been out between three and four days, and got over one hundred members. We haven't organized yet, but a committee is coming down here to see what can be done. I have a list of the citizens of the county who are willing to join in the Napa County exhibit. That is about all I have to say.

Mr. WETMORE: I would like to ask if the Supervisors of your county have appropriated anything?

MR. ZIERNGIBL: Not that I know of.

MR. PRIBER: I think the matter is in good hands now, and we will have a meeting at the court-house in Napa City in the next few days to decide if an appropriation should be made or not. I think we will have an organization as soon as we know whether the Supervisors will take any action.

THE CHAIRMAN: Is there any one here that wants to say anything on behalf of Sonoma County?

MR. WETMORE: Perhaps Mr. DeTurk will tell us whether the Supervisors have done anything.

MR. DETURK: I will say that the Supervisors have done nothing, and the indications are that they will not do anything. The people met the Supervisors and made their suggestions, and the Supervisors are undecided. Unless the people become more harmonious there will be nothing done, for the people are divided. There are a great many who oppose it. They say we are already taxed about \$9,000 in the State portion; so, until we know what is going to be done, they will do nothing about it. I think there should be an appropriation made.

THE CHAIRMAN: Mr. Davisson, has there been any talk around your way?

MR. DAVISSON: Nothing that I know of. I think you have very fully stated the situation.

MR. C. J. WETMORE: I will state that in Alameda County I have been appointed Chairman of the Viticultural Committee for that county, and they intend to make a good viticultural exhibit. Nothing has been done yet, except appointing the committee, but I understand from the World's Fair Committee there that whatever money we need will be furnished by the Supervisors, whether it is \$1,000 or \$5,000. Nothing has been done yet, but we can depend upon it that Alameda County will make a good exhibit. They will make a county exhibit or a general exhibit. I would like to ask Mr. DeTurk if the people are generally opposed to the Supervisors making an appropriation for the World's Fair?

MR. DETURK: I am not able to say that the people are opposed to it, but they are divided. The Supervisors said that if the people would come together and harmonize their discordant opinions that something might be done, but they didn't feel like doing it while there was a division among the people.

MR. C. J. WETMORE: I would also like to know whether if they appropriate, say \$10,000, if it is to be advanced towards viticulture, or how much to viticulture and how much to horticulture; or if they will do as in our county, appoint a board or committee to take charge of it, leaving it all to the committee?

MR. DETURK: In Sonoma County they have not decided. As I stated before, they left it to the people, and they are about evenly divided. The appropriation was not asked for viticulture alone. It was asked for horticulture and viticulture, and to represent Sonoma in all of its interests, such as timber products, dried fruits, green fruits, minerals, and everything they have. Viticulture wasn't mentioned specially, and if my remarks should have given the inference that there was opposition to viticulture, I wish to correct it.

MR. C. J. WETMORE: That is what I want to know.

MR. DETURK: There is no feeling of that kind. Of course there are individuals opposed to it, but there are very few that have such a feeling. THE CHAIRMAN: Dr. Mintie, of Santa Clara, can you give us some information?

DR. A. E. MINTIE: I am glad to say that Santa Clara County is perfectly organized in the World's Fair work. A World's Fair Commission was appointed by the Supervisors, composed of thirty-six of the prominent citizens of Santa Clara County, and was appointed with a view of the entire county being represented. Those thirty-six, after several meetings, formed a plan by which they appointed sub-committees, each of the sub-committees to be drawn from the main committee. Then in order to extend the influence of those sub-committees and the committee at large, four or five other prominent men from the county were added to it. We have twenty-six sub-committees. Every branch of the display is handled in that way. The viticultural and wine committee is composed of J. W. Pierce, A. Malpas, J. C. Mann, and H. Detoy. Mr. Pierce is a member of the Commission appointed by the Supervisors from Santa Clara County. The other gentlemen were selected by the Chairman and members of the Commission to act on the different committees with which they were familiar. You see we have not been idle, and there is no reason why Santa Clara County should not come to the front in this part of the exhibit, as well as any other. So far as the viticultural interests are concerned at the present time, nothing has been done, from the fact that the sub-committee representing that department of the work has not yet had their meeting. It is the plan of the Commission to have these sub-committees meet as soon as possible, so that each different interest will be represented, and they can be harmonized into one body. There are very many obstacles in the way of having so many different interests represented. In the first place, the plan is to have a classified exhibit of the State as a whole, a certain portion of the building being devoted to showing the products of the State, and in which each of the counties is supposed to be represented. Another portion of the building is set apart for the county exhibits, so that each county may have its space, and exhibit its products as a whole. Each county will want to be represented in the classified exhibit, and in their own space. Santa Clara County has already applied for a space of 3,000 square feet, a space 50 by 60 feet square. Just what proportion of that space can be devoted to viticulture remains to be seen, after we know what is done by the other committees. I speak of that as one of the many obstacles that we have to overcome. The question as to whether Santa Clara County will enter as a whole in the department of the National Building has not yet been broached, but it strikes me that that is a good plan, inasmuch as the space in the California Building must be limited in order to make room. It seems to me it must be done on some such plan as that, and in that case the county as a whole will enter as a competitor in the Department Building. I regret extremely not to be able to report that the viticultural committee have met, so that I could give you some idea of what they will do, but whatever they do they will do as well as possible.

A VOICE: Mr. Chairman, I would like to say one thing on that proposition. We claim to have a very good Board of Supervisors in Santa Clara County. They appointed one delegate from every school district to form a convention, but there was a clash; there were so many elements

which didn't harmonize, that the Board of Supervisors then selected this committee. That committee then selected their sub-committees, and they have proceeded to work in the utmost harmony. There is now no discord among them. I think that other counties that have not already formed their committees, would do well to follow our example.

MR. C. J. WETMORE: I would like to ask Dr. Mintie if the Supervisors have given any certain sum of money for any certain purpose?

DR. MINTIE: I will say, in answer to that question, that at a meeting some time ago of the Supervisors, there was some pressure brought to bear upon them, and the Supervisors passed a resolution to this effect: that it was the sense of the Board that the sum expended be limited to \$10,000. It was not positively limited, and last Saturday the Commission appointed a meeting with the Supervisors for consultation. The members of the Commission present were business men and large taxpayers, and a report that I had made that morning to the Commissioners was read, and the effect was to show to them that a large amount of work was to be done, and work that would cost money. When that conference was over the \$10,000 limit was knocked completely out of the Supervisors' minds. I think the Supervisors intend to do everything possible to make the exhibit a success. They want a good exhibit, and in order to show the sense of the Board at this time, they introduced a resolution to this effect: That it is the sense of the Board that the Commission appointed by the Supervisors proceed and secure an exhibit commensurate with the standing of Santa Clara County among the other counties in this State as quickly as possible, and whatever money was necessary in order to represent Santa Clara County thoroughly would be furnished. They are limited to \$40,000. Whether they will use all that I don't know, but it is proposed to have an exhibit that the people of Santa Clara County will be proud of, whatever the cost may be. That is the feeling, and I think that the Commission and the Supervisors are sustained by the people of Santa Clara County in that respect.

MR. C. J. WETMORE: I wanted to bring that out from Dr. Mintie to show that Santa Clara County is willing to appropriate so much money for it. Alameda County is willing to do the same. The delegates from the other counties can state to their Supervisors these facts, that the other counties here are willing to appropriate so much money, and are going to make a good exhibit, and it is necessary for them to make a good exhibit.

DR. MINTIE: Is there any one here from San Bernardino?

THE CHAIRMAN: I don't think so.

DR. MINTIE: Their appropriation is limited to \$7,500. I am credibly informed that they have placed the limit at \$50,000, and they are going to raise the balance by private subscription. They are working already on that amount. It seems to me that this is one of the times that every county should show what they are made of. It is an advertising proposition that will not come to us again in a lifetime, as a county, and it seems to me so stupid that any one having an interest in his county and in the State should allow this chance to pass without taking advantage of it. [Applause.]

THE CHAIRMAN: Mr. La Rue, we haven't heard from Sacramento. We are now inquiring what the counties have done, and what the Super-

visors are doing towards making a display in Chicago. Can you give me any information from your county?

MR. H. M. LA RUE: The Board of Supervisors have as yet made no appropriation, but they have promised that they will, and the President of our Board of Supervisors is taking a very active part in the work. Of course we are limited there by law to \$7,500, and there is a disposition among the members of the Board to cut that down, but Sacramento is going to make a good exhibit. They have appointed a committee, I think, of fifty gentlemen and forty ladies, which is at work now, and we have a sub-committee of five active workers, and they are getting their plans in operation. I have an assurance from the Board of Supervisors that they will make an appropriation, but there is no amount fixed upon. I think when the time comes that they will appropriate money enough to enable the committee to make a proper showing. Thus far we have organized, and have a membership, and collect dues each month. We raise quite a fund in that manner. Our people are quite actively engaged, and will get along on quite a small amount of money, comparatively speaking. Of course ours will be more a horticultural than a viticultural exhibit, but they will be able to make quite a display of table grapes. There are only one, or two, or three wineries in the county. Wine making is not so important as it is in some of the other counties, but there are quite a large number of fruit shippers, and it is their intention to make a large exhibit of green fruits.

THE CHAIRMAN: Is there any one here from any other county that we haven't called upon who can give us any information? Not being acquainted with all the gentlemen here, I would like to have you volunteer any statement you desire to make.

MR. LA RUE: I would say that we have organized a District Commission in the lower Sacramento Valley. They don't propose to make a separate district, but it is to assist each county in getting information and giving information. Placer County belongs to that district, and will make a fine exhibit. Solano and Yolo Counties are also members of it, and we expect to have El Dorado and Amador, and probably San Joaquin. The next meeting will be called for the purpose of bringing the counties together for consultation, and every county in that district will get an appropriation from its Board of Supervisors, and will make an exhibit at the World's Fair.

THE CHAIRMAN: Mr. Swett, can't you give us some information from Contra Costa County?

MR. JOHN SWETT: I don't think that any action has been taken in that county. There is very little wine making, and only a few vineyards. There is no organization, and I don't know whether there will be or not.

MR. WETMORE: They raise a great many table grapes.

MR. SWETT: Yes, I know.

MR. WETMORE: That comes in the line of viticulture.

MR. HAINES: Mr. Chairman, I would like to inquire if San Francisco will not make an exhibit. What is the matter with that?

THE CHAIRMAN: Mr. Priber, can't you answer that question?

MR. E. C. PRIBER: Mr. Chairman, I am prepared to answer that question. I understand that the intention of San Francisco is to make an exhibit; and certainly, then, we will join the different counties from the Commission, if the Commission takes it in hand. I understand the intention is not to make an individual exhibit.

THE CHAIRMAN: So San Francisco will stand in with the exhibit, in some form; that is all you can say?

MR. PRIEBER: I will ask Mr. Bundschu, if he is present. His district is San Francisco, and he is also a San Francisco merchant. We haven't had any meeting of the wine dealers, so I am not posted.

THE CHAIRMAN: Mr. Bundschu is not present, Mr. Priber. Is there anything else under this head? If not, we will hear a report from Mr. McNeil, from the State Exhibit.

MR. W. H. McNEIL: My report will be almost entirely of letters and answers that I have received from the department.

On April 19th I was appointed by the State World's Fair Commission as Superintendent of the State Viticultural Exhibit at Chicago. I immediately issued circulars, which I suppose everybody here has received—circulars numbered 1, 2, and 3; the first contains the objects, the second the classification, and the third is a blank to be filled by intending exhibitors in Group 20, Department B, which is the Viticultural Department.

Class 119 is the vine and its varieties, shown by living examples, cuttings, engravings, photographs, etc.

Class 120, methods of planting, staking, and training the vine.

Class 121, vineyards and their management.

Class 122, grapes for the table.

Class 123, grapes for wine making.

Class 124, grapes for drying—raisin grape culture.

Class 125, methods of, and appliances for, cultivating, harvesting, cutting, packing, and shipping grapes. This is also for raisin and table grapes.

Class 126, white wines. This includes every variety of white wine.

Class 127, red wine, which includes every red wine made, such as Claret, Zinfandel, Burgundy.

Class 128 is for the sweet wines, such as Sherry, Madeira, and Port.

Class 129, sparkling wines.

Class 130, methods of expressing the juice of the grape, of fermenting, storing, racking, bottling, and packing, and wine cooperage.

Class 131, brandy of all kinds, methods and apparatus for the production of brandy.

Class 132, literature, history, and statistics of viticulture.

I sent out two thousand four hundred circulars, and I have received so far eighty-nine answers, and of those eighty-nine, forty-two are exhibitors, and seventy-five have been returned to me as uncalled for.

I have the rules and orders for the Horticultural Division of the Chicago Exposition, and I think every one will be interested in knowing what they are.

A VOICE: That is, exhibits in the National Building?

MR. McNEIL: That is, exhibits in the Horticultural Department, Department B. It will not be necessary to take up the time of the convention in reading the rules, for every one can get the rules and read them. There are some, however, that are very important, that I will read:

Rule 1. Exhibitors will not be charged for space. A limited amount of power will be supplied gratuitously. This amount will be settled definitely at the time space is allotted. Power in excess of that allotted gratuitously will be furnished by the Exposition at a fixed price. Demands for such excess must be made before the allotment of space.

You understand that this is entirely in the competitive part of the Exposition—that is, in the Competitive Building. This has nothing to do with the California Building. The California Building is entirely under the California Commission, and whatever rules they may make afterwards.

Rule 3. Exhibitors must provide, at their own expense, all show cases, cabinets, shelving, counters, fittings, etc., which they may require, and all counter-shafts, pulleys, belting, etc., for the transmission of power from the main shafts.

Rule 4. Exhibitors will be confined to such exhibits as are specified in their applications. When the allotment of space is definitely made, exhibitors will be notified of their allotment of space and its location, and will be furnished with a permit to occupy the same, subject to the general rules and regulations adopted for the government of the Exposition, and the special rules governing the department in which their exhibit will be made. Permits for space will not be transferable.

Rule 6. Decorations, signs, dimensions of cabinets, shelving, counters, etc., and the arrangement of exhibits, must conform to the general plan adopted by the Director-General.

Rule 10. The expense of transporting, receiving, unpacking, and arranging exhibits, as well as their removal at the close of the Exposition, shall be paid by the exhibitor.

This I understand will be paid by the California State Commission, so that does not make so much difference.

Rule 13. If exhibits are intended for competition it must be so stated by the exhibitor, or they will be excluded from examination for awards.

Rule 14. The chief of each department will provide cards of uniform size and character, which may be affixed to exhibits, and on which will be stated only the exhibitor's name and address, the name of the object or article exhibited, and its catalogue number.

Rule 16. Exhibitor's business cards and brief circulars only may be placed within such exhibitor's space for distribution. The right is reserved to restrict or discontinue this privilege whenever it is carried to excess, or becomes an annoyance to visitors.

Rule 21. An official catalogue will be published in English, French, German, and Spanish. The sale of catalogues is reserved exclusively by the Exposition Company.

Rule 22. Each person who becomes an exhibitor thereby agrees to conform strictly to the rules and regulations established for the government of the Exposition.

Those are all the rules which it will be necessary to read. Now, as to the correspondence which I have had with Mr. Samuels, and which includes nearly all the work which has been done so far. I will read the letters which I wrote and the answers so far received:

SAN FRANCISCO, April 30, 1892.

J. M. SAMUELS, *Chief of Horticultural Department, World's Columbian Exposition:*

DEAR SIR: I have been appointed Superintendent of the California Viticultural Department by the California World's Fair Commission—

Duties—The collecting and care of all such exhibits, whether they are for your department or the California Building. I need some information, as follows:

In making application for space for the competitive exhibit, must each exhibitor make his own application, or can I, as Superintendent, make a collective application, giving each name, with numbers of wine or article to be exhibited?

Can you give me, approximately, the amount of space that will be allowed to California in the Horticultural Building, Department B, Group 20?

Circulars are being mailed to every viticulturist in the State, to enable us to know the number of exhibitors.

To what date can application for space be made?

Please mail to me direct all rules, regulations, and information for the guidance of exhibitors, as promulgated by you or the General Directory.

Please send two hundred copies "Classification and Rules, Department of Horticulture," also all blanks needed for the instruction of all exhibitors. A Viticultural Convention will be held May 18th.

I remain, etc.,

W. H. McNEIL.

WORLD'S COLUMBIAN COMMISSION,
OFFICE OF THE DIRECTOR-GENERAL OF THE EXPOSITION,
DEPARTMENT OF HORTICULTURE,
CHICAGO, ILL., U. S. A., May 6, 1892.

W. H. McNEIL, 317 Pine Street, San Francisco, Cal.:

DEAR SIR: I have your favor of the 30th inst., and will take great pleasure in answering the questions asked. I am glad that you are taking hold of the viticultural end of the California exhibit and intend to push it, as applications for exhibits in the viticultural group have been coming in more slowly than those in the other lines.

In reply to your first question, I would state that it would be best for each individual firm wishing to enter an exhibit to make a separate application, those that you secure passing, if you so desire it, through your hands before forwarding here, so that you can keep a record of the applicants and the space they desire to occupy. We will, from time to time, notify you of the applications that have been received from all viticulturists in California, so that your record may be kept complete.

The amount of space to be allotted to California for her viticultural exhibit will depend entirely on the number of applications received, the amount of space asked for therein, and the total amount of space at our disposal. This is a matter that cannot be adjusted, even approximately, until the greater bulk of the applications have been received. Hence our anxiety to have all intending exhibitors make application at the earliest possible date.

No actual date has as yet been set on which applications for space shall cease, but it is expected that the allotment of space will be made during the month of July, 1892, by which time the bulk of the applications are expected to be in.

I send you by to-day's mail packages of blanks, classification of the department, and other printed matter that may be of interest.

Hoping that you will write to me whenever I can be of any assistance in the work you have in hand, and that you will succeed in collecting a very fine exhibit, I remain,
Very respectfully,

J. M. SAMUELS,
Chief Department of Horticulture.

SAN FRANCISCO, May 7, 1892.

J. M. SAMUELS, Chief of Horticultural Department, World's Fair:

DEAR SIR: Another point I wish to ask about—
Class 126, Group 20, Department B, Table Grapes.
Our grapes do not mature or are not in condition to exhibit till about August 1st, and later. Will the time of entry be extended for such products?

Can exhibitors have special space for individual exhibits in the main building?

I am, yours respectfully,

W. H. McNEIL.

SAN FRANCISCO, May 7, 1892.

J. M. SAMUELS, Chief of Horticultural Department, World's Fair:

DEAR SIR: Class No. 126 says "White Wines."

We have in our State Exhibit as follows: Burger, Chablis, Chateau Yquem, Gutedel, Golden Chasselas, Hock, Haut Sauternes, Sauternes, Sauvignon Vert, Semillon, Riesling, Traminer, and White wine, thirteen in all. Will these be judged separately, or must they come unclassified under one head?

Red wines, we have Beclan, Burgundy, Cabernet, Carignan, Chambertin, Chaudé Noir, Claret, Grenache, Gros Mancin, Malbec, Margaux, Mataro, Petit Syrah, Pinot, St Julien, and Zinfandel. Does same rule apply?

Yours, etc.,

WM. H. McNEIL.

CHICAGO, ILL., U. S. A., May 11, 1892.

W. H. McNEIL, Esq., Superintendent Viticultural Department California World's Fair Commission, 317 Pine Street, San Francisco, Cal.:

DEAR SIR: Applications have been made by nearly every country in the world for space in the Viticultural Exhibit, and the area applied for, even at this early date, is much in excess of the amount available.

Would it not be advisable to suggest to your State Viticultural Association, at the forthcoming meeting, to send a committee to Chicago, or select some Californians who may be here, to look over the building and grounds, and designate the area and location that will be needed by the viticulturists of your State?

As the representatives of the leading viticultural State of the Union, any suggestions in regard to the number of bottles or quantity of each brand of wine or brandy that should be allowed to each exhibitor, and other matters pertaining to a proper display, will have considerable weight in deciding rules that will apply to the exhibits.

In reply to yours of May 7th, I will state that Class 126, to which you refer, will be elaborated into sections and sub-sections, and each brand of wine will be judged separately, as mentioned in your letter.

The fruit exhibits of the department will be divided into ten or eleven departments. The United States will be divided into three grand divisions, to conform to the character of the products, and the manner of growing them; thus, California grapes will be placed in the Western District, which will be the country lying west of Kansas. Grapes, of course, will be exhibited at the time they will be in best condition for that purpose.

Individual exhibitors can have special space, but all those from the same State will be placed contiguously in the space that will be assigned for the general exhibit from that State.

Very respectfully,

J. M. SAMUELS,
Chief Department of Horticulture.

SAN FRANCISCO, May 12, 1892.

J. M. SAMUELS, Chief of Horticultural Department, World's Fair:

DEAR SIR: Yours of the 6th received and noted, and am very much obliged for the information contained.

I have all along said the important item was to obtain the number of exhibitors in my special department. As soon as I received my appointment I at once set about trying to find who would exhibit. Next week there will be held a World's Fair Viticultural Convention. At that time many will express their wants, and I will give to it what information I have, especially your letter.

In making a display of wines, not very much space will be needed for each exhibitor, but a number being collected together can make a fine display, and the more space allowed the finer the display will be in the main building, or in the grounds around it.

If you will kindly furnish me the copies of all applications as you say, I can then keep my record complete. I have quite a number on file, which will be forwarded to you very soon.

Sorry you cannot give me some idea of the space that will be allotted to California in the main building and grounds, for it would give me a better idea of what can be done. I have stated that by July 1, 1892, all applications for space must be in your hand.

I suppose nothing has been done regarding rules for the examining jury.

Yours respectfully,

WM. H. McNEIL.

I therefore say that July 1, 1892, is the limit of time for application for space. I saw that in the papers, although there has been no official notice of it given.

It remains entirely for this convention, and also the members of the viticultural interests in this State, to help me in this matter. I think, from what they have said here, that it would be well if I forwarded the applications all at one time, and make the largest number possible. It states here that it is necessary for us to have as large a number of exhibits at one time as possible, and by keeping a record of them, through my office, we can keep an itemized account and tabulated statement of everybody who will exhibit. It will put no one out, and the amount of space depends entirely upon that.

The next letter I read was dated May 7th.

In Class No. 126 it says "White Wines." I gave him the number of wines, which in this case is thirteen in all, according to the list that we have in the Viticultural Café. I asked if they would be judged separately, or would they all go in under one head; and I stated afterwards the number of red wines that we have, and the answer to that question you have heard.

I also asked about table grapes, where it says "Our grapes don't mature," etc., and to that question you have also heard the answer.

You see the importance of making our applications as soon as possible, and having as large a number as possible.

I understand that Germany alone, in this Viticultural Department, has one hundred and forty exhibitors, and we, so far, have only forty-two.

Mr. Samuels also asks us here at this convention to state regarding the extent of our display, and we want to answer that right here.

In the matter of blanks, I have copies of all the necessary blanks

with which to make the official applications, and also of the special blanks that have been formulated for vines or trees to be packed in boxes, giving the height in feet, etc. I have all the data necessary in order to go there.

I have received answers to my circulars from the following: A. Haraszthy & Co., Yolo County; Jacob Schram, Napa County; Hoelscher & Co., San Francisco; A. B. Humphrey, Mayhew; Eli Wells, Mayhew; John F. Rodgers, Martinez; California Wine Growers' Union, San Francisco; John L. Beard, Warm Springs; William Harvey, Fresno; C. C. & C. Agee, Dixon; Barton Estate Co., Fresno; A. G. Chauché, Livermore; Santa Cruz Mountain Wine Co., Santa Cruz; Cupertino Wine Co., Cupertino; John Pollock, Central House; Charles Cranz, San José; R. Heney, Jr., Mountain View; Fresno Vineyard Co., Fresno; El Quito Vineyard Co., Santa Clara; St. Hubert Vineyard Co., San Francisco; St. George Vineyard Co., Santa Clara; Margarita Vineyard Co., Fresno; M. D. Phelps, San José; Robert Hall, Sonoma County; Paige, Morton & Monteagle, Tulare County; N. J. Haines, San José; John Crellin & Son, Pleasanton, Alameda County; A. Repsold & Co., San Francisco; Katherine MacKenzie, Santa Cruz; John A. Stewart, Santa Cruz; A. H. Grossman, Napa; Paul Bieber, St. Helena; J. B. Whitcomb, Colfax; M. M. Estee, Napa; Webster & Sargent, Minturn; William Wehner, Evergreen; A. B. Dresbach, Indian Springs; D. D. Davison, Sonoma; Lay Clark & Co., Santa Rosa; J. P. Onstott, Yuba City; A. Benjamin, Santa Rosa; Mrs. E. E. Wise, Healdsburg.

I think that is all I have to say. This gives the result of the work I have done in the last three weeks.

You have here a picture of the California Building, as it is proposed, situated where Mr. DeYoung said, right at the eastern end of the Midway Plaisance. This, of course, is going to be amended a little, but it is understood that the whole show of the State will be here [showing]. This upper part is to be reserved for the California Café, for the sale of the products of this State, both wines, fruits, and vegetables. [Applause.]

THE CHAIRMAN: Does any one want to ask Mr. McNeil any questions?

MR. S. P. CONNOR: I have a few questions here that I would like answered. Would it not be a good idea to ascertain how many counties are represented here by asking members from each county to stand? Then appoint a committee, of say three, from each county, to form a plan on general organization and the best way to exhibit, and let them report, and have the report acted upon by the whole meeting.

THE CHAIRMAN: I think that is covered by most of the county organizations in this State.

MR. CONNOR: I mean only the viticulturists.

MR. C. J. WETMORE: Mr. Connor wants to get the number of delegates that are here in this convention from the different counties, and then have the committee, as I understand, meet together, say after we get through with the convention meeting, and then report to-morrow morning some plan of action that they have prepared among themselves, and then have it discussed when we meet to-morrow morning.

DR. MINTIE: I would like to ask Mr. McNeil about the sale of fruits. Do you mean actually that there can be sales of fruits?

MR. McNEIL: That is as it is understood at present.

DR. MINTIE: Simply in the café? I asked the question for this reason: It occurred to me possibly that when the Exposition is under way we

could make arrangements with the fruit growers to send fruit every day, and to have the first day exhibited on the tables, and then the second day to have that replaced by new fruit, and to sell what was exhibited yesterday, for instance, to-day.

MR. McNEIL: I think that is a decidedly good proposition.

DR. MINTIE: That is the reason I asked the question.

MR. McNEIL: Of course my duties are connected with the viticultural exhibit, and the care of it. I also have charge of the café at Chicago, as it is understood that we are to have a café in our own building. There will be at least one hundred and fifty cafés and restaurants in and around the grounds, and they will have a seating capacity of eighty thousand. You see by the position of our building on the ground that it will have a good situation, and I include the sale of wines and California fruits and vegetables. Arrangements will be made whereby we can receive them daily, or every two days, say, whatever is necessary, and I should think that plan would be a good thing to adopt by this convention.

THE CHAIRMAN: Mr. Connor, if you will make this as a motion we will get the sense of the meeting.

MR. CONNOR: I will make a motion to that effect.

THE CHAIRMAN: That you call on the various counties that are represented here?

MR. CONNOR: I make a motion that the delegates from each county stand up separate, that when each county is called for the delegates stand up to show which counties are represented.

THE CHAIRMAN: Do I hear a second to the motion?

A Voice: Second the motion.

MR. BUNDSCHU: I would like to know if the motion covers the point that it is the official representatives of the county, or if any one from any county can get up and say, "I represent that county." Must it be the official representative of the county?

THE CHAIRMAN: It has been moved and seconded that the delegates from each county present stand up, and that a committee of three be appointed from each county to form a general plan on organization, and the best way to exhibit, and let them report, the report to be acted upon by the whole meeting.

MR. McNEIL: I will state that in the call for this convention the different county World's Fair organizations were asked to send delegates here. We sent out probably three thousand of these circulars to all portions of the State. Now, the county World's Fair organizations might send delegates, and the people from the same county may have been invited to attend, and they may be here. I think it would be a good idea for every person from each county to stand up.

MR. CONNOR: Provided they represent viticultural interests.

DR. MINTIE: It seems to me that motion is hardly practical, to appoint three from each county on a committee. For instance, there are fifty-four counties in the State. Suppose all the counties are represented, we will have a committee of one hundred and fifty. It seems to me we can cover the ground, and I will offer as an amendment to that motion, that one representative from each of the counties here be placed upon that committee, and that they formulate a plan and submit it for action before this body.

[Amendment seconded.]

MR. BUNDSCHU: I would request our Chief Viticultural Officer, Mr. Wetmore, to state to this meeting how the Board of Viticulture think that can be accomplished. There were different branches that wanted to be recognized; and we had a discussion about that, and thought it would be best to select different persons to represent each branch. Will you state it, Mr. Wetmore?

MR. C. J. WETMORE: I will state that at the meeting of our Commission yesterday we thought it best to appoint a committee on certain branches that would be represented at this convention, or according to the call. The call was for all persons interested directly or indirectly in viticulture, whether they were grape growers, wine makers, brandy distillers, wine merchants, raisin packers, coopers, manufacturers of stills, or manufacturers of wine-making machinery, and we expected to have a full meeting and representatives from all these different branches. It therefore occurred to us that it would be better to appoint a committee from each class, as, for instance, the distillers, the committee to act with Mr. McNeil, and to report to the State World's Fair Commission, and all our actions are to be reported by him to them. If we act here in any manner which is contrary to their rules, it would be out of order. Now, if there was a distillery committee, a committee on the wine branch, the cooperage, and such things as that, Mr. McNeil at any time could converse with those gentlemen and ask them questions and determine what is necessary to be done. It seemed to us yesterday that if such committees of these different branches were appointed it would answer all purposes, and that is what we are coming to now. Yesterday at the meeting we suggested certain names, and of course it would be for this meeting to suggest names, or adopt the names that were suggested yesterday.

DR. MINTIE: Mr. Chairman, we have met for the purpose of determining the best way to exhibit the viticultural interests of this State. It seems to me that while that idea is first rate, there is so much machinery about it that it will almost fall of its own weight, whereas it seems to me that the motion of the gentleman on my right to have the counties represented, and to report to this body some plan, is a practical one. For instance, can we exhibit growing vines, and if so, where? Shall we exhibit as a State, as Mr. Wetmore suggested in his speech this morning? All these questions, it seems to me, should be brought before this body, hence I am in favor of the motion as amended before the house.

[Upon being put to a vote, the amendment was declared carried.]

MR. C. J. WETMORE: Now, we must have some manner of finding out how many counties are represented.

DR. MINTIE: It seems to me the only way is to call the counties alphabetically, and have them respond.

MR. CONNOR: It seems to me the motion is rather mixed up. My motion was to call up the counties, and ascertain how many counties were here, then afterwards to have the committees appointed.

THE CHAIRMAN: I guess it was understood; the counties are not very numerously represented.

MR. C. J. WETMORE: Dr. Mintie included that in his motion.

DR. MINTIE: The amendment I offered was to change the number from three to one.

THE SECRETARY: I will say that I can see here representatives from

Napa, Sonoma, Alameda, Santa Clara, Contra Costa, Los Angeles, Sacramento, and San Francisco Counties. Are there any other counties represented?

MR. C. J. WETMORE: Another question is, how shall this committee be appointed? Will the different members from the different counties come together and appoint one member from their delegation to represent them, or shall the Chair appoint the committee?

MR. CONNOR: I think it would be safe to leave it with the Chair, and I would make that as a motion.

[Seconded.]

[The Chairman then put the motion, and the vote being in the affirmative, it was declared duly carried.]

THE CHAIRMAN: The committee will be appointed before we adjourn. The next subject for discussion is the preservation of fruit in jars. Professor Hilgard is expected to speak on that.

PROF. E. W. HILGARD: I have been requested to say something to you in regard to the preservation of fruits for the World's Fair exhibit, and I shall tell you something about the experiments that we have made on that subject for the last two years. I am sorry to say that the experiments were not continued during the last year, on account of lack of time.

Those present, I suppose, understand that it is necessary to use liquids in preserving specimens for any length of time. It is not possible to take a bunch of grapes, or fruits of any kind, and preserve them in their natural state without loss, unless in liquid. Of late, a number of articles have been published speaking of preservation in gas. This is not used, because the charging of the cars and transportation will cost so much that it is impossible to make it up.

Bruising is one of the greatest troubles, you will find, in preserving fruit; and the first thing, therefore, which it is necessary to observe in putting up fruit, even in liquids, is not to have it too ripe. In fact, the rule which should be observed is to have the fruit as unripe as you can get it and still represent the color and shape and size. The harder it is the better. You cannot expect to have fruit so that it will keep, and at the same time have it ripe. You will find that true of almost any preservative that is used, so far as we know.

In getting specimens, the first thing is that they should not be too ripe. I will show you the result of putting up specimens too ripe in corrosive sublimate, the best preservative that we know, and you will see how impossible it is, even with perfect care, to preserve them. If the jar had been transported the fruit would have been completely out of shape. Now, in gathering fruit, don't confide it to any one who is not interested, and who will not touch and handle it just as little as possible. The proper way would be not to touch the fruit at all, but to handle it in pieces of tissue paper, and don't handle grapes at all after they bloom. In the preservation of grapes in good condition, of course it is absolutely necessary to suspend the bunch from the top of the jar, and you can get your jar with a hook ready for that purpose. You can get these in the market, and they are not very expensive either.

Now, in regard to the liquids to be used. It may be said that practically there are three that will interest us, because we generally use one of these three. These are sulphurous acid gas, which we use in preserving fruit, and which you have seen used; salicylic acid, and then the best

preservative of all is corrosive sublimate. Corrosive sublimate is so poisonous, however, that on the whole I don't think it is well to put it in the hands of those that usually put up fruits; but it takes but a very small quantity of corrosive sublimate to make a very good preservative liquid. The only trouble is that while it preserves the fruit very well for a few months, it deposits on it that fine, little white film that makes it look corpse-like, and it doesn't look very well. The fruit that they preserve most successfully with corrosive sublimate is figs. Grapes I haven't tried. I should think, though, that they would not look different with corrosive sublimate from their natural condition. I should say, with regard to this liquor, that the less you handle it the better, as it is very poisonous.

The preservative that is best known to you all is probably sulphurous acid. It is known in all the wineries, and how to make it. This acid is easy to manage. All you have to do to make it is to burn sulphur strips in a keg or barrel sufficient to impregnate the water. In actual experiments that I have made, if I wanted to make half a barrel of this liquid, which is made from the fumes of burning sulphur, I would fill the barrel half full of water, and then burn the sulphur strips in it eight, nine, or twelve times to get the proper strength. That is to say, you push the strip in the bung-hole, cover it over, and let it burn until it goes out, then agitate the barrel. That is the method. It takes about an hour to finish a barrel, and, remember, the bigger the barrel the better, and the less liquor you put in the better, but if you fill it half full it will take about twelve burnings to make it strong enough. The strength is very weak then; it is only one tenth of 1 per cent. Then the water smells strongly of sulphur, and must be kept bunged up.

When you use this solution the first thing necessary is that the fruit used should be tested. If the solution used on the outside is stronger than the liquid on the inside, the fruit will shrink; and if it is the contrary, the fruit will burst. In the case of grapes, sometimes there is toughness enough to resist the action. For instance, take the Cabernet Sauvignon; it might not burst; but if you take a delicate-skinned grape you can't trust it, and the only way to prevent their shrinking or bulging is to make the solution on the outside of the same density as the solution on the inside. No matter what solution you use, or what it is, you must do this, or the grapes, and particularly delicate-skinned grapes, will not stand it. One of the best agents to use is glycerine; you can use sugar, but glycerine is better, and is now cheap enough to do it. Most skins will stand a little stretching. Grapes with as much as 25 per cent of sugar should not be put up at all. They cannot be preserved. They will fall off.

Now, as for the effects of these different liquors. I have already stated that the corrosive sublimate deposits a little white powder which it is hard to get rid of. Sulphur, as you know, bleaches, but with white grapes that makes no difference.

There is one other solution that I think well of, and that is salicylic acid. Salicylic acid solution is an excellent preservative, and it is very easy to make. It takes only an ounce to five gallons of water, and you must dissolve it well in cold water. It is very necessary that it should be fully dissolved. One ounce in five gallons has been proved to be about the right strength, but, as I said before, you must get the density the same inside as outside the grapes, but you will have very little diffi-

culty about that. If you can't trust yourselves to make that solution, it is better to have a druggist make it. They can follow out the directions without any difficulty.

I will show you some specimens of fruit that have been preserved in that way, and here are some apricots that were a little too ripe. They have been preserved in corrosive sublimate, and every one is broken open. There was no glycerine added, and they have become too large for their jackets. They have changed in form, and the corrosive sublimate has given them a ghastly look, but they show the size pretty well. I show you here the results of the operation of salicylic acid with and without glycerine. I suppose you can see that these are perfectly preserved in shape, but they have lost color. Here is a cherry that was ripe, and there was no glycerine added; these two specimens are exactly the same thing, except that one has had glycerine added to it, and the other has not; they are white cherries.

Now, here you have a cherry which is very common, but it is larger than any ever grown on a tree. It has swollen. Here is a Governor Wood which has burst, and shows the effect of not adding glycerine. Here they show the effect of too much glycerine. Here are two jars containing the same cherry, one without glycerine—just with the liquor. It is sulphurous acid liquor, and here is one that has too much glycerine. In passing these around you will see that one has shrunk too much, and the other has burst open.

When it comes to oranges and fruits with thick skins, fluid doesn't attack them.

MR. C. J. WETMORE: I would like to ask whether either one of those, corrosive sublimate or salicylic acid, will preserve the color?

PROF. HILGARD: They will not keep it perfect. I don't believe anybody has succeeded in doing that yet. For black grapes I think the best thing is salicylic acid, and for white grapes sulphurous acid is better. I understand that Mr. Turrill has a liquid which has preserved fruit for seven years. I haven't been able to do that, and I would like very much to know about it myself. Now, gentlemen, I have shown you samples for pretty much all that I have told you, and I leave it to you to act upon as you wish. [Applause.]

DR. MINTIE: You have spoken of sulphurous acid for white grapes, and salicylic acid for black. What fruits outside of the grape would you use salicylic acid for?

PROF. HILGARD: For every deep-colored fruit. I have experimented somewhat with other fruits, and I couldn't get as much satisfaction from the other two as I could from this. Now, with anything that is green, I don't know what the chemical action is, brown spots will come on the leaf, and ultimately it will all become brown; and while it will not take the color away as rapidly as sulphurous acid, it will in the end. Sulphurous acid is the one that most people will use in fruits which do not need to be preserved as to color. I know of no preservative that will keep the color. The fruit should be very carefully washed before preserving it.

MR. CONNOR: How do you get the sulphur in the bung-hole?

PROF. HILGARD: You use the sulphur strip; that is to say, a strip of cotton cloth such as you use all the time for sulphuring barrels, and light it at the end and put it in the barrel and close it with your hand

or finger. Then let it burn, and then shake it up, and in the meantime it will be all absorbed. Then do the same thing over again.

DR. MINTIE: I had a barrel with a cover made for the purpose, and I merely cover the top over and I burn sulphur in a pan. I succeed in getting a very strong solution.

PROF. HILGARD: That is the method adopted by the Board of Horticulture. The trouble is to have a place where you can do it without choking yourself. In this case you have four or five vents.

DR. MINTIE: You can obtain these strips prepared, or you can simply tear off a piece of cloth and put it in sulphur.

THE CHAIRMAN: There are plenty in the market for sale. You can get them by the hundred pounds if you want. Now, gentlemen, we will announce our committee, and then we will hear from Mr. Turrill.

MR. S. P. CONNOR: An idea has occurred to me since. I think the Viticultural Commission should have one representative in that committee, and if it is not too late I will make that as a motion.

THE CHAIRMAN: Mr. Bundschu and Mr. Bichowsky will act with the committee, so it is the same thing.

[The Chairman then announced the committee, as follows: From Napa, S. P. Connor; from Sonoma, D. D. Davisson; from Alameda, A. G. Chauché; from Los Angeles, E. C. Bichowsky; from Santa Clara, Wm. Wehner; from San Francisco, Charles Bundschu; from Sacramento, H. M. La Rue; from Contra Costa, John Swett.]

MR. C. J. WETMORE: I suppose that committee should report to-morrow, should they not?

THE CHAIRMAN: Yes, I suppose they can.

MR. C. J. WETMORE: We want to finish up the World's Fair business to-morrow morning, because to-morrow afternoon we want to attend to other matters.

THE CHAIRMAN: Mr. Turrill, we will hear from you on fruit preservation.

MR. C. B. TURRILL: Gentlemen, I have but very little that I can say on this subject. I have a jar here that I have carried around the country for nine years. It contains a bunch of grapes that I put up in Fresno in the fall of 1883, and the jar was taken by me from here to New Orleans; from there to Louisville, back to New Orleans, and then here. It has been exposed to all conditions of light. There has been no chance to keep it in the dark, and, as you understand, that is one of the most important things in the preservation of fruit. I can't give you the formula of this solution. I don't know whether I have it or not. It was a solution that was prepared by a chemist who has since died—died while I was away from the State—and I made efforts to ascertain whether he made any memoranda in regard to his solution. Up to the present time I have not been able to ascertain. I am going to look into the matter in a very short time, and see if I can get it.

I have used a large quantity of this solution, and will say that on other fruits it has acted very well—I think equally as well as it has on this bunch of grapes. You all understand, of course, that taking several peaches and putting them into jars, you often find one that does not keep as well as the others, and that is on account of the different degrees of ripeness; but I have preserved peaches, plums, prunes, and grapes especially well, and still half of them have lost a portion of their color. I think they have all retained their color better, though, than in any

other preservative solution that I have ever seen. I don't know that there is anything more that I can say to you about it, except to show you a specimen.

DR. MINTIE: Can you give us any idea as to whether the solution is expensive?

MR. TURRILL: No, it is not expensive. I have all the bills.

[At this point the convention adjourned until to-morrow morning, May 19th, at 10 o'clock.]

SECOND DAY'S PROCEEDINGS.

SAN FRANCISCO, May 19, 1892.

[I. DeTurk acted as Chairman.]

THE CHAIRMAN: Gentlemen, I have great pleasure in introducing Capt. Thomas H. Thompson, Secretary of the California World's Fair Commission.

CAPT. THOMPSON: Mr. Chairman and gentlemen, the President has just asked me to cover a little more ground than I expected. I would say first, on behalf of the Commission of California, that we wish, in every way possible, to assist you in making an exhibit at Chicago that will be thoroughly successful, and a credit to the State. It has been a subject that has received a great deal of attention at our hands (almost more than any other), and we were in hopes that after this convention that you people would develop some plan and submit it to us, showing how and where and when we could best assist you. We are placed in a very peculiar position. In order that you may know some of the difficulties that we have had to contend with, I will say this: that on the 1st of December last, before there was a dollar available for the use of the Commission, we had on file in our office applications for over \$500,000 from the people of the State of California, each one of which applications was backed up with from one to ten pages of type-written matter, going to show that that was the most important matter in the State of California. In those applications there was not a word from the Agricultural Department, the Horticultural Department (including viticulture), and the Mines and Forestry. There were four great industries that had not applied for a dollar; still, there were on file applications for over \$500,000. So you see the Commission has had a pretty knotty problem to solve. These people all wanted us to help them make their exhibits.

The Commissioners, since the case was decided in the Supreme Court, have been steadily at work. They have a great many general expenses which must come out of that fund. First, the organization of the plan; second, the securing of an exhibit. The freight charges from here to Chicago will be no inconsiderable matter, and the maintenance of that exhibit at Chicago must necessarily cut a very large figure. There are six months that that exhibit must be cared for, and it will require a large number of men, and a great deal of expense there; and then the department's expenses, and the printing work, make quite a hole in this appropriation. To illustrate, the postage alone on matter that is going out of our office must be about \$30 a week. You can see that something is being done in the way of correspondence and circulars that are being sent out.

All of these various departments, the leading ones, such as agriculture, horticulture, viticulture, mines and mining, etc., the Commission have considered the most important ones, and they have tried to estimate as nearly as they could the various expenses that they will be compelled to pay. They have thought proper to appropriate about \$100,000 amongst these various departments.

There was a communication received from the Viticultural Commission at our last meeting, making some complaint that the amount of money set aside for this department was insufficient. That is true of every department in the State, but at the present time it was all that the Commission felt justified in setting aside. They felt that they must hold a reserve fund, to meet any unforeseen expenses that might occur; and that sum, while it is put down in our books, is not arbitrary. If you don't want to use it, you need not; and if you want more you may get it, but that will be for the Commission to decide afterwards.

In pursuance of the request of many of you gentlemen, our Commission appointed Mr. McNeil as Superintendent of the Viticultural Exhibit, believing that he was the closest to you, and could carry out some plan for you. I don't believe there is any member of our Commission, with the exception, possibly, of Mr. Rose, who is familiar with the detail work of your exhibit; and believing with you, gentlemen, that Mr. McNeil could devolve some plan, his appointment was made. We believe he is a good worker. He seems to be active and energetic; and if from your deliberations of to-day some plan is decided upon whereby our Commission may be able to help you, and give an exhibition of the viticultural interests of California at Chicago, in such a manner as will be a credit to you and California, I am sure that the State Commission will feel disposed to help you in every way that they can. I don't know that I have anything further to say. [Applause.]

THE CHAIRMAN: Is there any person present who wants to ask Mr. Thompson any questions? I presume he is ready to answer any questions, if you want to ask them.

CAPT. THOMPSON: Mr. Chairman, I will state that this whole proposition of an exhibit at Chicago from California, and everywhere else, for that matter, is entirely an unknown problem. We have not the faintest scintilla of anything to figure from. I write to Chicago almost every day for information on some particular point, and I get either evasive or unsatisfactory answers. They cannot say definitely at this time. I am told that there will be a lot of new suggestions in the character of exhibits, and things of that kind, and that information will be given to this department later. I take it that it is very much the same there as it is here; and that if anybody was to ask what the viticultural exhibit of California will be, it would be impossible to answer. It depends on the individual exhibitor; and the department at Chicago depends on the general exhibitors. They tell me to go ahead, and they will take care of everything when it gets there.

Now, if there is any particular point that any one wants information about which I can give, I will be glad to do so.

[There were no queries.]

THE CHAIRMAN: I have no doubt Captain Thompson feels like we all feel. We are beginners, and are working under disadvantages, and, as I have said to some of our friends, we are wrangling around here. When we get to Chicago we will find competitors worthy of our steel, and we

must combine to defeat them. When we get to Chicago we will find that we are not nearly as large as we think we are. Is the committee ready to report, Mr. Connor?

MR. BUNDSCHU: Mr. Chairman, I have to report that through some misunderstanding some of the members of the committee thought it was this morning at 8 o'clock that we were to meet, instead of last night, so we have only just had a consultation, and the report might have been formulated a little clearer than it is in some instances; so we have to ask your indulgence:

The undersigned members of your committee, appointed for the purpose of suggesting a plan of organization, recommend as follows:

1 That a general, harmonious, and artistic exhibit of the grape and grapevine and its products, consisting of dry, sweet, and sparkling wines, brandy, and raisins, etc., should be made in the California State Building at the Columbian World's Fair.

2 That a concentrated, classified exhibit should be prepared for the National Building for the purpose of competition and awards. County groups and individual producers should herein have as much distinctive recognition as practicable.

3 Said exhibit should include all apparatus and paraphernalia pertaining to the production, preservation, racking, and storing of wines, cellar utensils, cooperage, and distilleries.

4 The organization and collection of the exhibit should be managed by the Board of State Viticultural Commissioners and its Chief Viticultural Officer.

However, as the duties and labors connected with a faithful and judicious performance of this task are very exacting and complicated, we recommend the appointment of a committee, which, in conjunction with the Board of State Viticultural Commissioners and the Chief Viticultural Officer and Superintendent of the State Viticultural Exhibit, shall constitute the Viticultural Central Committee, on all matters pertaining to the wine grape and viticultural products.

5 Said committee shall be organized on the following basis:

Wines (dry and sweet)	7 members.
Brandies	3 members.
Sparkling wines	1 or 2 members.
Grapes and grapevines	3 members.
Cooperage	2 members.
Machinery, utensils, and distilleries	2 members.
Literature and statistics	3 members.

Which would form a total of twenty-one members in that committee.

6 The committee should be appointed by the Chair, with due consideration of a fair division of the viticultural districts, but principally with a view of concentrating its members within easy reach of San Francisco, so an Executive Committee may be enabled to establish a permanent communication with Superintendent McNeil or the officers of the Viticultural Commission.

7. When the amount of available space and appropriation of funds shall be definitely settled, the committee should work out its plans of operation in detail, submit the same to the California State Commission or the Chief of the Viticultural Department in Chicago, for approbation, and thereafter devise ways and means to successfully carry them out.

Respectfully submitted.

S. P. CONNOR.
A. G. CHAUCHE.
H. M. LA RUE.
D. D. DAVISSON.
E. C. BICHOWSKY.
CHARLES BUNDSCHU.

When we recommended, in No. 6, that the committee should be appointed by the Chair, with a fair division of the wine-producing districts, we thought, of course, that all the wine-producing districts could not be represented in that committee, so you will have to leave it to the discretion of the Chair whom to recognize, and we trust that any one, if he feels overlooked in the committee, will not feel slighted. In order to make a working committee we must center the committee as near San Francisco as possible. We have very great difficulty in our Commission on account of the members living so far away, and that is why we think that the committee must be centered near this city; it must emanate from San Francisco.

For this reason, as explained, we recommend that the Chair appoint the committee.

THE CHAIRMAN: Gentlemen, the report of the committee is before you. Have you anything to say on it?

DR. MINTIE: There are a number of recommendations there, and I move that the report be taken up and acted upon seriatim. [Seconded.]

[Upon being put to a vote, the Chair declared the motion duly carried.]

[Upon request the Secretary read over the report, and then read the first paragraph. Upon motion duly made and seconded, the paragraph was declared adopted.]

[The Secretary then read paragraph 2, which, upon motion duly made and seconded, was declared adopted.]

[The Secretary then read paragraph 3, which, upon motion duly made and seconded, was declared adopted.]

[The Secretary then read paragraph 4.]

MR. N. J. HAINES: Mr. Chairman, in our conversations and in the remarks of the gentlemen, they all seem to show that space is one of the great requisites. Now, I believe that the viticultural products are the most important in the Exposition, and while the mechanical devices, cooperage, and so forth should all be represented; yet the one will crowd the other. That point is a most important one to viticulturists, but if we have to be crowded down into a smaller space, then the Commission should decide who shall be represented.

THE CHAIRMAN: This clause gives it all the latitude that is necessary.

MR. CHARLES BUNDSCHU: We meant that all branches should be exhibited in Chicago.

MR. N. J. HAINES: I have no objection to them, but they might come in and take half the space, and the consequence would be that the wines would be crowded and limited.

MR. BUNDSCHU: The committee has arranged principally for the wines, and these others are more of an appendix.

[Upon motion duly made and seconded, the paragraph was declared adopted.]

[The Secretary then read paragraph 5.]

MR. H. M. LA RUE: Is the committee to take cognizance of all matters, as well as the wine exhibits?

MR. McNEIL: Wouldn't it be well to introduce a rule there detailing the duties of that committee?

MR. BUNDSCHU: That would be a detail for this committee; that is, one of the details that come under the supervision of this committee that is to be appointed.

DR. MINTIE: I would like to amend that by adding the Board of Viticulture and the Chief Viticultural Officer.

MR. P. C. ROSSI: Why wasn't Mr. McNeil added to that committee? Why can't Mr. McNeil be added?

DR. MINTIE: The amendment I wish to make is this: I want to insert the name of Mr. McNeil.

MR. McNEIL: In what connection; in conjunction with the Viticultural Commission?

MR. DAVISSON: His name was not put there, and we didn't wish to disturb Mr. McNeil in his duties. We were disposed to let them alone. This committee would certainly be, in a measure, under his control.

This committee would advise and consult with him. He holds a higher position, and adding him to it would not be proper.

DR. MINTIE: You misunderstand me. Shall this committee act in conjunction with Mr. McNeil?

MR. DAVISSON: That is, in union with him.

MR. BUNDSCHU: I second the amendment.

DR. MINTIE: The amendment is to put in the name of Mr. McNeil.

[The Secretary then read the motion, as amended, to include the name of Mr. McNeil.]

MR. BUNDSCHU: What is the official title of Mr. McNeil?

THE SECRETARY: Superintendent of the State Viticultural Exhibit.

[Upon a vote being taken, the Chair declared the amendment duly carried.]

MR. BUNDSCHU: The raisin industry was left out inadvertently.

MR. C. J. WETMORE: And there is another industry. Table grapes should be in there.

MR. BUNDSCHU: You can add that. We were very much hurried.

MR. C. J. WETMORE: They consider it a separate industry.

MR. HAINES: I move to amend the section as read by adding "three members for the raisin department," and that will mean exhibits of grapes also, will it not?

THE CHAIRMAN: You can make it raisin and table grapes.

MR. HAINES: Will three be enough?

THE CHAIRMAN: Yes.

MR. HAINES: I move to amend by adding three more to the committee, to consist of raisin and table grape men.

MR. CONNOR: That committee should be either one more or one less, because it should be an odd number.

MR. HAINES: I will make it one more.

MR. LA RUE: I don't think it is good to get this committee too large; and as to even or odd numbers it makes no difference, for we never have a full meeting anyhow. If you have two or three from the raisin industry it will be all right. I move that two members represent the raisin industry and two the shipping and table grapes.

MR. HAINES: I accept that.

THE CHAIRMAN: The motion is that four more members be added to this committee, two on raisins and two on table grapes. The raisin men will have their own committee, and if they can work in conjunction with us we would be glad to have them do so.

MR. DAVISSON: The whole committee will act in conjunction with each other. These are merely representatives, just as we are representatives of the different interests of the different counties, but the work will not devolve upon one or two men. I look upon it in this way: that we are all interested in different exhibits. I know nothing about table grapes, but I am interested in all classes of grapes.

[The Secretary then read the numbers of the committee as it stood, being a total of twenty-five.]

[It was moved that the Committee on Wines be reduced from seven to five.]

MR. HAINES: There has been no second. We have two champagne manufacturers in California, and it is something that should be encouraged; and we have one in Santa Clara County; I move that the Committee on Wines be reduced one member.

THE CHAIRMAN: This committee has not yet been appointed, and they can cover the ground that you are getting at.

MR. HAINES: I move that one more be added to the Committee on Champagne.

MR. HARASZTHY: I don't see any necessity for that. The Committee on Wines is quite sufficient. The general idea is that the committees are expected to consult with portions of the industry. Now, three could consult just as well, and very likely one or two will do it; but there is no need of hampering the committee by adding more members to it.

THE CHAIRMAN: Your idea is to reduce the number of the committee?

MR. HARASZTHY: I offer a substitute to that, that the committee of five be reduced to three.

THE CHAIRMAN: Gentlemen, the motion is that the wine committee be reduced to three.

MR. HAINES: I am opposed to the motion. It has been contended that the whole committee will not assemble. Now, why should it be reduced? I can see no reason whatever. I believe in giving every one representation, but I cannot see any reason for reducing the committee. We have many counties, and many men of prominence in them, and I think the resolution as it stands should be adopted.

MR. BUNDSCHU: I think we have a big country in California to represent, and if it is reduced possibly the various interests will not be satisfied. I think the original motion should prevail.

MR. WEHNER: I think, myself, that seven members would be sufficient, but I would strike out viticulture alone, and have the committee of seven for wines and brandy and viticulture.

MR. HAINES: I move to strike brandy out of the committee, and increase the number to nine.

MR. BUNDSCHU: I object to striking out brandy. Our brandy interest is large, and we must do something to help it. I think the three members for brandy should remain. It is distinct from the wine industry.

DR. MINTIE: There is no reason why the Chair should not appoint a representation of the brandy interest. There might be even two or three named in the seven.

[The Chair then announced that the motion is to reduce the committee from seven to five, which, upon being put to a vote, was lost.]

MR. HAINES: I call for the original motion.

[The Chair then put the motion that the committee consist of: wines (dry and sweet), seven members; brandy, three members; raisins, two members; table grapes, two members; grapes and grapevines, three members; cooperage, two members; machinery, utensils, and distilleries, two members; literature and statistics, three members; making a total of twenty-four members.]

[Upon motion duly made and seconded, the paragraph was declared to be adopted.]

[The Secretary then read the sixth paragraph.]

MR. HAINES: Mr. Chairman, there is no need of that section; it is cumbersome—not intending any disrespect to the committee—but we will appoint men who will have the interest of the whole State at heart; still, I move its adoption.

[Upon motion duly made and seconded, the paragraph was declared to be adopted.]

MR. HAINES: Mr. Chairman, I move the adoption of the report of the committee as a whole as amended.

[Upon motion duly made and seconded, the report of the committee as a whole was declared to be adopted.]

MR. LA RUE: I would offer a suggestion that is very important about the appointment of this committee. I suggest that the Chair announce them hereafter. I don't see any necessity for making the appointments to-day. I move that the Chair take all the time necessary to appoint this committee.

MR. MCNEIL: Mr. La Rue is all right on that, but there is one thing he must take into consideration, and that is about the delay of this work. We have got only about forty days in which to do it, and the Director of the World's Fair wants those applications all in by July 1st. The committee has to do that.

MR. BUNDSCHU: I make an amendment that the Chairman be given three days' time to appoint that committee.

THE CHAIRMAN: I think I can make it by this afternoon; at any rate, as soon as I can. It is not necessary to put that as a motion. Now is the proper time to introduce resolutions, if there are any to be offered.

MR. C. J. WETMORE: I believe there is one here.

DR. MINTIE: I believe this is the proper time to enter upon another matter, and to discuss the proposition, and if it is thought advisable, to have a motion introduced as to the sense of this convention, with reference to making an exhibit at this so-called "Dress Rehearsal" in San Francisco next January. In order to bring the matter before the convention, I move that it is the sense of this convention that the Viticultural Exhibit be shown at that dress rehearsal.

MR. HAINES: There are two sides to the case.

THE CHAIRMAN: Was there a second to the motion?

[The motion being duly seconded, the Chair announced that it was open for discussion.]

MR. HAINES: Now, I will simply present the two sides of the case, and one is that the viticulturist has to make two exhibits instead of one, and it takes a great deal of time. Another is that if we have anything with which to astonish the world, the exhibitors will find it out all over the country. I believe furthermore, that it would not benefit the State at all. I don't think the people generally from all sections of the State would go into it. It might benefit San Francisco. I don't know whether I am opposed to it or not, but if I were exhibiting I don't know whether I would like it or not.

THE CHAIRMAN: Mr. Turrill, have you anything to say?

MR. C. B. TURRILL: I would say, Mr. Chairman and gentlemen, that at a convention of the county organizations, recently held in San Francisco, it was decided that this county organization would do everything that it possibly could to further this idea of a preliminary World's Fair exhibit in this city. There was but one question raised—one important question—and that was the matter in conflict of dates. This display in the Mechanics' Pavilion was first arranged to take place this fall. The Directors of the World's Fair from some of the sections lying around Sacramento came to the city and consulted with the Commission and the Directors of the Mechanics' Institute. On the strength of their representations, that if this preliminary exposition was postponed until January, they would all work earnestly and would have no objec-

tion, and do all in their power to assist in making it a successful display; the preliminary fair was then postponed, so that the great objection in that line has been removed.

Now, as regards the objections that the gentleman raised. Of course one of the main points that the Commission had in mind in arranging for a preliminary fair, or, as it has been named, the "Dress Rehearsal," was that an opportunity might be given for rearrangement or redistribution of the different exhibits. It has been my experience (and I think it is that of you all, that the second time you set up a display they understand exactly what you are going to have) that the second arrangement is always better than the first—always more complete, and you are better satisfied with it, and can add things that have been forgotten. That was the prime object of having a preliminary exhibit in this city. There is, of course, some point to the suggestion that the gentleman raised, that if a display is made here, and if the papers mention it, as we want them to do, somebody may go us one better. I think, on second thought, that is only so much to be said in favor of the enterprise; for if we take into consideration that the fair opens in Chicago in May, the Exposition in this city will close so as to leave time for the transportation of this exhibit and its installation in the California Building, and such as may be added to it in the main building in Chicago.

After the opening of this fair the viticulturists of this State will have nothing to fear from any other section in going there one better. The European exhibitors and those of other States will have done all they will do prior to the time that we will make this display here, and we may know, perhaps, what they are about to do. The going one better will be confined between the sections of this State, and that, I think, will be a good thing, as each section will be spurred on to do more than it might do otherwise.

You have provided for the appointment of a committee, the report is full and complete, and it is one of the most important steps that has been taken in the State looking towards representation in Chicago. Your committee, as they prosecute their work, will find that one section or another may be a little backward in attending to this affair, and this will give them an opportunity to show exactly what is going to be done. So far as your wines are concerned they will be taken from your stock already on hand, and as one producer after another goes through this exhibit in the pavilion he will say at once: "I have neglected to do this that I should have done," and he will go home and send some more wine or some raisins. I think the upbuilding of your exhibit in completeness will offset any objections that may be made in any other direction.

As far as the duplication of your exhibit is concerned, as I understand the resolution which has been introduced, it will not affect the exhibits made by the individual exhibitors, which are going into the main hall for competition. There is nothing which will prevent the individual from exhibiting in the Mechanics' Pavilion. As I understand, the intention is that the State shall exhibit as a whole.

It is very important that the exhibit shall be set up where it can be criticised by you gentlemen. Then there is another point. Yesterday Mr. Wetmore raised the question of the object of this Exposition in Chicago. There is no question that our wines should be made better known at home. Here is an opportunity of accomplishing that on a

greater scale than has been done heretofore. I think, therefore, that everything points in favor of making as complete an exhibit as you can in the Mechanics' Pavilion.

There are some things that you may want to suggest, but those will probably be only trivial matters.

I want to say one word in regard to the management of this Exposition. The Mechanics' Institute has decided to allow this fair, or to allow the use of their pavilion this year—it is now postponed to next year—by the State Commission for this preliminary Exposition, and their regular Mechanics' Fair will be abandoned this year. An arrangement has been made by the Commission for a division of the profits, so that the Institute will receive a rental for the pavilion, and the management of the fair will be almost entirely under the Commission, the Mechanics' Institute agreeing that the State Commission should get the benefit of their twenty-six years' experience in regular Expositions.

The State Commission found that it would be important for them to use no money for this work, as it has been impossible for them to appropriate money for other purposes, and all the expenses of this Exposition will be paid from the Exposition.

I don't know that it is necessary for me to go into this matter any further. I will say that I have opened an office in the Flood Building, and will be glad to see you, and that I want to work thoroughly in harmony with you all, as I have the assurance of Mr. Wetmore and Mr. McNeil that we shall do so.

I have had some little experience in this line, and also in the matter of the viticultural work of the State, and I have already suggested to Mr. Wetmore a number of things that I think will be within the province of the California State Viticultural Commission. Those matters will of course be brought up at a meeting of that Commission at their next semi-annual convention. I think this is an opportunity that only comes to us once in a lifetime, and I think that we ought to endeavor to make our Exposition established in the California Building in Chicago a grand success, and show what we can do. We realize all the obstacles that the viticulturists have had to contend against formerly, and it is only by letting the world know what we have done and can do that we can hope to mend the condition of the viticultural interests. It is only by educating our own people to the fact that we raise as good wines in California as in any other part of the world that we can do so. We should commence right here educating our Californians. They need it as much as, possibly, the people east of the Rockies; I am inclined to think even more so, and for that reason we should make as full a representation as we can.

MR. C. J. WETMORE: Probably that question should rightly come before the Executive Committee, which has just been appointed. There might be some portions of the viticultural exhibit that could be repeated there, and some that could not. When the first meeting of that committee is held, the question can come before them.

DR. MINTIE: I knew there would be a discussion, and it was with a view of giving that committee the arguments, pro and con, out of this convention, and to give them the benefit of these ideas, that I thought proper to introduce the motion. I, myself, am decidedly in favor of the exhibition at the Mechanics' Pavilion. There is no possibility of any thing going us one better, because this is distinctively Californian. It is

so near the time of the Exposition in Chicago that our competitors can't get our ideas in time, and it seems to me that if there is an Exposition, as there will be, and the great viticultural interests of the State are not represented, it would look as if we had surrendered. Besides, this kind of an exhibit is not perishable, and it can be done with a great deal of credit. In addition to that, it will give us an opportunity of seeing how others work; the ideas of a hundred men are better than those of three or four. In addition to that the exhibit in Chicago will be more harmonious, neat, and complete than if left until the time for the exhibit in Chicago. Consequently, I am in favor of this motion, and we don't say that "It shall be," but that "It is the sense of this convention that it be." That is not final. If it should be found later that it is impracticable, the reasons can be given by the Executive Committee. I want simply to find out whether it is the sense of this convention that an exhibit of that kind take place.

A VOICE: I move to amend by referring to the committee after it shall have been appointed.

DR. MINTIE: Some people might take a certain way, and go us one better. If we go into this enterprise with the idea that others will go us one better, we are losing hold. We ought to go in with the idea that no one will do better, and we will win. I know that the grape industry and the wine industry of California can compete easily with any other State if we go into it with the right idea. The idea of any other State excelling the State of California in its wine and grape industry to me is ridiculous, provided we do our work thoroughly.

MR. WM. WEHNER: I care about the San Francisco Exposition, and I desire to present some points. I remember having been Chairman of the committee when Santa Clara took the prize. Let the counties come in, and they will not know what they are competing against until they get there. If we have a competition here, and one county comes in and doesn't know what the other counties are doing, and they come in and find they are not in it, they will say, "Oh, pshaw, I don't want that." Another thing: In Chicago they may want to put up vats that can't be taken down here, and they may want machinery and such things that cannot be presented here. However, if it is the sense of the Commission, I will be most happy to see such an Exposition in San Francisco.

MR. F. A. HABER: There is one question: Is it understood that this dress rehearsal will be specially to represent all the viticultural interests in this State, and no other exhibit, at the Mechanics' Fair? The question is whether this exhibit will be specially to represent the viticultural interests of California, and nothing else.

MR. TURRILL: I think it is right for me to answer the gentleman. The preliminary Exposition at the Mechanics' Pavilion will be a convention entirely Californian. This is not a Mechanics' Fair, nor will it be an exhibit entirely of viticulture; but it will consist of those articles in all the various departments which go into the California Building, with the addition of as many articles as are going into the building for competition.

MR. HABER: Mr. Chairman, I would like to know who is going to get the money to be derived from that. I want to know, for the reason that I think that the money received from this Exposition should be added to the special funds to increase the donation by the State. There ought to be quite a large amount, if the fair is properly conducted. I would

like to know where that comes in. Some of the large growers who are bottling and selling their wine, if they intend exhibiting there (and I believe it is the intention of most of them), can't go there without expending from \$400 to \$500. That ought to be applied to the fund, to increase the fund that is going to be spent in Chicago.

THE CHAIRMAN: I don't believe the motion has included any restitutions from the Commission at all. This is the first time I have thought of it.

MR. TURRILL: That is a matter which rests entirely, of course, with the State Commission. Mr. Scott is Chairman of the State Commission. The portion which goes to the State Commission will be used by the Commission in paying the additional expenses. The money which goes to the Mechanics' Pavilion is in the nature of payments for the building, and we will have the use of that building for some time. The money which goes to the Commission will be used in connection with the expenses of the work, and I am satisfied that the Commission will be very willing to appropriate that to the industries which are represented in the Exposition.

MR. HABER: I asked the question for the reason that it appears that the sum that has been apportioned for the viticultural interest has been a very small one, and it certainly must be increased, or no proper exhibit can be made. I perceive that every State in the Union will have a larger sum to work upon than California, in that direct line, because we must put ourselves on a high horse, and imagine that we are everything. The people in the East take more pride in their five-acre vineyards than many of us do with two or three hundred acres. They are very proud of their vineyards; they are very different from the men in California.

DR. MINTIE: The reason that I didn't put into that motion anything about the proceeds of the fair is because we can't control a cent of it. Here is a resolution made by the California Commission to display the California exhibit as a whole. Now, it is not compulsory upon any county in this State or any organization to appear there, but can we afford, as viticulturists, as separate counties in such an exhibit of the State, to stay away? The remarks that Mr. Haraszthy has brought out will perhaps have this effect, and I am glad they have been made. We might, perhaps, appoint a committee, if you choose, to go to the State Commission and say: "Here, everybody in this State knows that the viticultural appropriation has been very small—smaller than any other appropriations that you have made. If there are profits in this Exposition we, as viticulturists, want you to correct a mistake that has been made, and give us more money." But we have nothing to do with the receipts. We have only to find as to whether it will be better for us to exhibit there, and that is the only question that can possibly come before this convention.

MR. HARASZTHY: Following up that line of thought, I think it will be in order to introduce a resolution that a committee be appointed by the Chair to wait upon the Commission and see what can be done in the matter.

MR. SCOTT: I have a suggestion to make concerning this dress rehearsal. Mr. Haraszthy tells us that they are going to give us a very small appropriation. I offer as an amendment that we assist in this dress rehearsal, provided they give us some of the funds to assist in making a proper exhibit.

[Dr. Mintie stated his resolution to be that it is the sense of this convention that the viticultural interests of the State, to be represented in Chicago, be exhibited here in the dress rehearsal.]

THE CHAIR: Is there any amendment?

MR. WETMORE: Mr. Scott offered an amendment that we encourage this dress rehearsal, provided they give us a certain portion of the funds towards the exhibition in Chicago.

DR. MINTIE: I would like to speak on that motion. It seems to me that it is not practical. The viticultural interest is only one interest. If we go on record and say, "If you give us so and so," every other interest in the State will follow. I say let us go there and appoint a committee and say: "We are standing in with you, and we want you to give us more money if you can."

MR. SCOTT: That has already been done.

DR. MINTIE: What has been done?

MR. SCOTT: They have been asked, time and again, to give us more money.

MR. HARASZTHY: I would like to inquire if the exhibitors at the dress rehearsal will have to pay their own expenses?

DR. MINTIE: I can answer that such exhibits as are exhibited by the State Commission they will pay the freight upon them, but any private or even county exhibit, I understand, outside of the question of freight, will have to pay the expenses.

[The amendment, and second thereto, were withdrawn. Thereupon the original motion was voted upon and declared duly carried.]

MR. HARASZTHY: Mr. Chairman, I make a motion that the Chair appoint a committee of three (and exclude myself; I don't want to be included in that committee) to wait upon the Commission to show them that they will derive some benefit from this Exposition that we are going to make at our expense, and ask for some help from these funds for the industries represented. I think this committee should be able to show them that it is to the advantage of the State to increase our appropriation.

MR. CONNOR: I think there is a resolution in the hands of the Secretary that will cover this whole question.

MR. HARASZTHY: I will delay this motion and allow the resolution offered by Mr. Wehner to be read.

[The Secretary then read the resolution offered by Mr. Wehner, which is as follows:]

Resolved, That the appropriation of \$6,000 for viticultural purposes set aside by the State World's Fair Commissioners, is entirely too small with which to make a creditable display of viticultural products.

Resolved, That in view of the importance of viticulture in California, of the number of people engaged and the amount of capital invested in the industry, and the important part that viticultural exhibitors will be called upon to take in preparing a creditable display in the California Building, the State World's Fair Commissioners are respectfully but urgently requested to increase the amount set aside to at least \$12,000.

MR. WEHNER: In connection with this as a motion, I would ask Mr. Wetmore to state to this meeting what has been done in order to get them to increase the appropriation.

MR. C. J. WETMORE: I will state that at the last meeting of the World's Fair Commission we sent a letter to them, stating these facts that are embodied in this resolution here. That letter can be read showing what was done. To that letter we received no answer from the com-

mittee. I understand that it has been filed. Let the Secretary read the letter.

MR. BUNDSCHU: Mr. Wetmore has stated an occurrence of two weeks ago. Three months ago the State Commission addressed the Board of State Viticultural Commissioners, asking what we would think fair as an appropriation. Our claims were put in. After taking out \$100,000 for expenses, we wanted one fifth of the remainder, or \$40,000. We have received no reply since. We were never invited before the Commission, but a short time ago we received a notification that \$6,000 was put aside for our purposes. That is as far as I know the history of this matter. We protested, and our letters have never been answered.

MR. LA RUE: As long as the State Commission has declined to answer the communications from the State Board of Viticulture, I think this is a good opportunity to do something. I think we should first demand more money; but whether we should make an exhibit in the California Building, is another question. I suggest a division of the question.

[It was then moved to amend the two resolutions by combining them in one, allowing Mr. Haraszthy's committee of three to be appointed by the Chair to carry these resolutions to the Commission.]

MR. HARASZTHY: I rise to a point of order.

THE CHAIRMAN: State your point, Mr. Haraszthy.

MR. HARASZTHY: My motion was to divide the question so that we could act upon it. I am in favor of making a demand for more money, but I am not in favor, if they will not give us more money, of saying that we will not make an exhibit.

DR. MINTIE: The motion that we have just passed—let us see what position we are in. We have now passed a resolution that it was the sense of this convention that we appear at this dress rehearsal. We have an Executive Committee, and it is suggested that we have a committee to wait upon the State Commission to find out whether they will give us any more money. If they don't receive this Executive Committee with proper consideration, and if they refuse to make any concessions at all, and if that Executive Committee, on account of that, says "Gentlemen, we can't make an exhibit in the Mechanics' Pavilion," I don't think that there is a member of this convention that will not say that this committee has done right.

MR. LA RUE: I think the resolution is that we will not exhibit in the California Building in Chicago, and not in the Mechanics' Pavilion.

MR. WEHNER: Six thousand dollars is not sufficient. Where are you going to get the rest of the money?

DR. MINTIE: This refers to the California exhibit.

MR. WEHNER: In the California Building?

MR. C. J. WETMORE: I think the Secretary should read the letter first that was sent to the Commission.

THE SECRETARY: This letter was written by Mr. Wetmore and myself after a meeting of the Executive Committee, and to this letter we have received no reply.

[Here the Secretary read the letter, which was as follows:]

World's Fair Commission, San Francisco:

GENTLEMEN: Your letter of the 29th ult., in which you state the amount set aside by your Board for special displays, has been received.

Quoting from the letter, the amounts are: Agriculture proper, \$10,000; Horticulture proper, \$12,000; Fish and Fisheries, \$5,400; Viticulture, \$6,000; Mines and Mining, \$15,000. In the opinion of the Board the amount you have set aside for viticulture is wholly inadequate as compared with the display that must be made.

At Chicago the viticulturists will be called upon to make a wholly unique exhibit. Other States will have all agricultural products. Other States will have products of the orchard, the fisheries, and the mines. But we will have no competitors worthy of the name in the products of the vine—at least as far as concerns the United States. Our display of wines, brandies, raisins, table grapes, and other viticultural products will be absolutely without duplicate from this country.

This Board has already expressed the belief that there should be set aside one fifth of all the funds remaining in your control after deducting cost of building and administrative expenses. We believe that we are entitled to this, not only on account of the novel display that we shall have to make, but because the capital actually invested in producing these home products warrants it.

The total taxable real property of the State, as reported by the State Board of Equalization, is in round numbers \$690,000,000. The actual value is not far from \$1,500,000,000. There are in this State to-day about 200,000 acres of old and new vineyards. There are about 140,000 acres in bearing. The total capital invested in wine, raisin, and table-grape vineyards, bearing and not bearing, in wineries and wine-making machinery, in cellars and cooperage, in wine cellars in San Francisco and in the East, in distilleries and special bonded warehouses, in raisin-packing houses, in cooperage establishments directly engaged in making cooperage for wine and brandy, and in other establishments directly dependent on the viticultural interests for their support, is probably not short of \$200,000,000.

This is a very moderate estimate, inasmuch as those connected with this industry must have a larger capital involved for the amount of business done than any other agricultural calling in the State. We have more capital invested, and our product is equal in value to that of the horticulturists. It is greater in value than that of the mines, and far greater than of the fisheries.

We have endeavored to obtain an estimate of how much the counties will set aside for viticultural display, but thus far it would appear that no division of their funds has been agreed upon in any instance. We have, however, received numerous letters from gentlemen connected with the industry, giving their views upon the appropriation set aside by you. From these letters we take a few extracts:

W. W. Lyman, St. Helena: "I was much surprised to hear that the State World's Fair Commissioners should have made such a small appropriation for viticulture. It certainly stands on an equal footing with horticulture, and should therefore receive the same recognition from the Commissioners as the latter."

Frank A. Kimball, National City: "The mining exhibit with everything arranged and classified, almost no work to do except to pack and ship, has nearly three times the appropriation made for the viticultural exhibit, when the cost cannot be one third as much. I am in favor of every industry having an appropriation based upon its importance and merit."

Capt. H. W. McIntyre, Vina: "I deem the appropriation for the viticultural purposes for the World's Fair wholly inadequate, and altogether disproportionate to the viticultural interests of our State."

H. W. Crabb, Oakville: "Viticulture ought to have an appropriation of \$12,000. I believe in a grand State exhibit only."

These may be taken as indicative of the feeling that exists in the different sections of the State in regard to this matter.

We would respectfully request you to increase the appropriation to \$12,000, which would in some degree be commensurate with the importance of the industry which we have the honor to represent.

(Signed:)

GEORGE WEST, Chairman,
I. DETURK,
CHARLES BUNDSCHU,
E. C. PRIBER,

Committee.

WINFIELD SCOTT, Secretary.

MR. HARASZTHY: Mr. Chairman, this shows what you have to do. It shows that you want a committee right there.

[The motion to divide the resolution before the house was then seconded.]

THE CHAIRMAN: Mr. La Rue's motion was to divide the resolution.

MR. LA RUE: That we consider that portion of the question independent of the other. I want to consider the question, and if we adopt the first part, then we can take up the second part.

[The motion being then put to a vote, was declared carried.]

MR. LA RUE: I move the adoption of the first part of the resolution.

[Seconded.]

[The motion being then put to a vote, was declared carried.]

[The Secretary then read the clause which asked for an increase of the appropriation to \$12,000.]

[A motion was duly made and seconded to that effect, and, upon being put to vote, was declared carried.]

[The Secretary then read the clause: "And if the Commissioners refuse to increase the appropriation, as requested above, no collective exhibit in the California Building be made.]"

MR. HARASZTHY: I move as a substitute that a committee of three be appointed by the Chair to interview the State World's Fair Commission.

[No second.]

[Moved and seconded, that the last portion of the resolution be stricken out.]

MR. CONNOR: I would make a suggestion here, and afterwards I will put it as a motion, that we leave this clause to the committee. It is a question whether we can make a respectable display unless we can get more money.

MR. WEHNER: I would like to know what we are going to do if the Commission refuses to increase the appropriation.

THE CHAIRMAN: We will stay at home, I suppose.

MR. WEHNER: Then you might as well say so.

THE CHAIRMAN: The World's Fair Commission is overwhelmed with demands for money, but if we let them alone they will do well by us, I think.

MR. WEHNER: Why did they give horticulture \$12,000?

MR. SCOTT: I can answer that. Mr. Hatch is a member of the Commission.

[The motion to strike out the last clause, having been duly voted upon, was declared carried.]

MR. E. W. MASLIN: Mr. Chairman and gentlemen, I have a resolution to offer, and it will be hardly necessary for me to speak of the necessity of California being represented in the Executive Department of that fair.

[Resolution read as follows:]

Resolved, That the application of Hon. H. M. La Rue, of Sacramento, for the position of Chief of Viticulture at the Columbian Exposition, under Hon. J. M. Samuels, is heartily indorsed, and that we, the viticulturists of the State, in convention assembled, respectfully urge Director-General George R. Davis to appoint Mr. La Rue at the earliest possible date.

MR. HARASZTHY: I will allow my resolution to wait until this is decided.

[The resolution being duly seconded, upon being put to a vote was declared unanimously carried.]

MR. BUNDSCHU: I propose that the following telegram should be sent to General Davis at Chicago:

To GENERAL DAVIS, Chicago:

Wine growers and wine makers assembled in convention to discuss Columbian World's Fair matters request that the claims of California for Chief of the Viticultural Department should be recognized, and urge the early appointment of Hon. H. M. La Rue, of Sacramento, as the unanimous choice of all parties at interest.

(Signed:)

I. DETURK, Chairman.

[This being put as a motion, and duly seconded, was, after vote, declared carried, and the Secretary was instructed to send the telegram during the noon recess.]

MR. HARASZTHY: I have made a motion, and it is before the meeting, that a committee of three be appointed to wait upon the Commissioners and see what further appropriation they can secure; to show the Commissioners that if they have no money from the appropriation already made by the State, that they should give us a larger appropriation of the money procured from this dress rehearsal; to show them that it is absolutely necessary; and to state that our appropriation should be increased.

[The motion being duly seconded, was, after vote, declared carried.]

DR. MINTIE: I suppose that the Chair will appoint the committee?

MR. HARASZTHY: Yes, sir.

DR. MINTIE: I would suggest the name of Mr. La Rue.

MR. LA RUE: I think it would be better to suggest the names of people more interested in it; for instance, Captain McIntyre and Mr. Haraszthy, and others.

MR. HARASZTHY: I must decline being on that committee. I have been too often to see this Commission. I would look a little stale, and look as if I was trying to run the Commission.

THE CHAIRMAN: It would be very improper for the Chair to appoint anybody else than yourself.

MR. HARASZTHY: There is Dr. Mintie, and Mr. Bundschu, and many others.

MR. HAINES: I move, sir, that this committee consist of Mr. Haraszthy, Mr. La Rue, and the Chairman of this convention.

[Upon the motion being seconded, Mr. Haines proceeded to put the motion to the house.]

THE CHAIRMAN: The motion is out of order, for a motion has already been carried that the Chair appoint.

MR. HAINES: I move to reconsider the clause wherein the appointment of this committee was given to the Chair.

[Cries of "No, no."]

DR. MINTIE: I suggest that the Chairman of this convention be added to the committee of three.

[This being afterwards made as a motion, and duly seconded, upon vote was declared carried.]

MR. DAVID WOERNER: Mr. Chairman and gentlemen, I have made a study for some time as to what way I could assist the viticultural interests of California at the Chicago World's Fair Exposition, and I would like to have the committee show me in what way I can best do this. The only thing I can do is in the making of casks. In the matter of wine cooperage we can stand alongside of any European nation, or the East, in the excellence of work and facilities for carrying on that work.

THE CHAIRMAN: There is a committee already appointed, and there will be a committee appointed on cooperage. That is already provided for.

MR. WOERNER: I ask that Captain McIntyre or Captain Niebaum be appointed upon that committee.

MR. WETMORE: I will state before we adjourn that this afternoon we will take up the subject of the condition of the market. The Secretary has about forty or fifty letters to read from different portions of the State about the frost, and then Mr. Haber will make some remarks on the storage of wine.

MR. MCNEIL: I hope, as soon as possible, to receive as many of the answers from the different exhibitors as possible.

[At this point the convention took a recess until 2 o'clock P. M.]

AFTERNOON SESSION.

The Chairman called the meeting to order.

THE CHAIRMAN: Gentlemen, the Secretary has a few communications to read, and after that we will discuss the frost question, the crop prospects, and so on.

The Secretary then announced that he had received a letter from Governor Markham, regretting his inability to be present, and also a telegram from Mr. J. DeBarth Shorb, sent from his home, stating that illness prevented him from coming to the convention.

THE SECRETARY: Now for the crop reports. I have here about sixty extracts taken from letters which were sent in reply to letters from Mr. Wood and myself. I will read them:

SANTA CLARA COUNTY.

N. J. Haines, San José.—About one fifth damage by frost. Present weather is favorable for coulture.

H. A. Merriam, Los Gatos.—I have nothing new to report in this matter, the foothill section having escaped damage from the frost almost entirely.

A. H. Wood, Cupertino.—In this immediate vicinity there is little or no apparent damage to vines from frost, but lower down the valley nearly all the vineyards are damaged, and some of them severely. I estimate the loss from frost at from 20 to 25 per cent. Prunes also are dropping badly.

John T. Doyle, Menlo Park and Cupertino.—The young vines not yet in bearing are cut down by the frost. No damage to our vineyards. I hear that Mr. Portal, and others farther down in the valley, are badly cut by frost.

J. C. Merithew, Cupertino.—Since my last report I hear of more damage by the frost, but as I have not had time to look about, I cannot at this time give a correct estimate. Last night, May 11th, was cold and frosty, and I expect to hear of more damage. On the west side of the valley the vineyards show but little damage, but the blossoms are looking badly; they are all turning red, so even here in the warm belt we now expect a short crop. All kinds of fruit will be short.

Solis Wine and Fruit Co., Gilroy.—We were not hurt in this locality by the earlier frosts of recent occurrence. The damage reported in our last was done by what you refer to as a second visitation, which was the time we suffered. There is, therefore, nothing further to report, and we have no reasons for changing our opinion as expressed to you in our last as to the extent of the damage. In the lowest spot on all our ranch the thermometer (self-registering) showed a temperature of 25° on the worst night of this spring.

E. E. Meyer, Wrights.—The vines are in good condition. No damage was done by frost or rainy weather with me, or any of the nearer neighbors. The outlook is for a good crop.

H. Heney, Jr., Mount Cabernet Vineyard, Cupertino.—There was frost in the valley, but I do not know how much. I should judge that not more than 5 per cent was damaged. The foothill vineyards escaped.

ALAMEDA COUNTY.

A. Duwall, Livermore.—In the report made lately I wrote "no damage by frost." Since then the situation of the vineyards has changed. The frost of late has damaged the crops at least 25 per cent. It is quite too early to judge the exact damage, or what will be the next crop.

John Crellin & Sons, Livermore.—One fourth of the crop, at least of the crop at Ruby Hill, is gone. The greatest damage was done to the low-lying vineyards, between Pleasanton and Livermore.

Chas. C. McIver, Mission San José.—The frost has not injured a vine in my vineyard, and I have not heard of any damage whatever in this district.

H. B. Wagoner, Livermore.—The damage by frost in this locality will average 25 per cent. The outlook now is for a light crop, more especially as the two preceding crops have been heavy on Zinfandel (which constitutes the bulk of the crop), while the present crop of that variety, everywhere uninjured by frost, is making a poor showing.

SONOMA COUNTY.

William D. Sink, Cloverdale.—The vines in this locality are damaged by frost 10 per cent and by hail 15 per cent, making 25 per cent, but in reality we cannot judge the damage yet, as we have had no fair weather for ten days. Some of the vineyardists set

the damage from one third to one half, but I think one fourth about the damage. Prunes are badly hurt by hail. Some vines are completely stripped of their foliage, and look as if the grasshoppers had been at work.

I. De Turk, Santa Rosa.—Low-lying vineyards are cut short one half. Vineyards on higher ground are damaged but little.

D. D. Davison, Sonoma.—The damage done to the grape crop in the Sonoma Valley by frost does not exceed 2 per cent. This report applies to all that portion of the Sonoma Valley lying south of the Los Guilicos district.

E. G. Furber, Cloverdale.—After interviewing the principal grape growers from the Cloverdale district, I have come to the conclusion that if we get one half of our usual crop it will be fully up to our expectations after such long-continued cold, frosty, and rainy weather. Many of us anticipate the droppage of one half of what still remains if there is no immediate change in the unprecedented weather.

Dresel & Co., Sonoma.—The frost in the lower part of Sonoma Valley came in waves, and it was not a general frost. Some vineyards escaped entirely, while others suffered to the extent of 30 to 40 per cent. The entire loss to this section may be estimated at about 15 to 20 per cent. We have now a cold northwest wind, which, if it subsides over night, may bring on more frost. The vines look fair and promise a good crop, barring accidents.

Guy E. Gross, Santa Rosa.—In compliance with your request of May 9th, allow me to make the following report: In traveling over our grape sections of Santa Rosa Valley, Los Guilicos Valley, and the Rincon, I will estimate that one third of the grapes are on the lowlands, and two thirds on up and hill-lands. The frost has damaged the lowland vineyards at least 75 per cent, and the hill-lands—while some vineyards in favorable localities escaped entirely—have nevertheless suffered a damage of 25 to 33 per cent. With many vineyardists I am of the opinion that there is not now more than one half to a two-thirds crop in sight. Jack frost made another visit this morning (May 11th), but I have not yet learned the extent or severity, but I think it was light. Prunes are less than a half crop in this country.

Ferdinand Albertz, Cloverdale.—Around Cloverdale, and River Bar, and Upper Dry Creek the vineyards are damaged a great deal. On the foothills not so much; but I will not be able, until after the blooming, to state the exact damage the frost has done.

The American Concentrated Must Co., by Baron A. von Schilling, Geyserville.—Answering to your circular, we are pleased to state that we have had no frost worth mentioning since our last report. Thus no damage is perceptible. The crop so far is very favorable, and everybody is taking a deep interest in the welfare of their vineyards.

F. Korb & Bros., Korbels.—The frost has done 15 per cent damage in our locality.

E. E. Onley, Superintendent for Kohler & Frohling, Glen Ellen.—In reply to your circular, I must say that in this part of the valley, and within a radius of several miles, the crop outlook has not been materially changed by the last frosts. The vines look healthy and are in good condition, and I believe that (in our neighborhood) this year's crop will be nearly as heavy as last year's.

James Finlayson, Healdsburg.—The late frosts have done no damage to grapevines so far. They were not far enough advanced in this district.

James A. Shaw, Wildwood, Los Guilicos.—Since receiving yours of the 9th instant, I have made it my business to see for myself what damage has been done by the frost. I find that about eight miles up the valley the frost has been more severe than in this immediate vicinity. There, I should say, they have lost two thirds of the crop, with the exception of the Guilicos Vineyard (Mrs. Hood's), which is scarcely hurt at all so far, although the two adjoining vineyards have lost about 25 per cent. The vineyard next to me has about a half crop, while I have lost one third. On one portion of my vineyard, from which I took one hundred tons of grapes last year, I doubt if I could get more than twenty tons this year. This of course is the worst frosted portion of the vineyard. As far as I am able to judge, the grape crop this season would have been a light one, regardless of frost. The strangest feature of this year's frosts is that the vineyards which have ordinarily suffered the worst in former years have escaped, while those never attacked before are badly injured. The vineyard on the hills back of me, at least two hundred feet higher than I am, has suffered, something never known before, and it is quite an old vineyard in the country. Since writing the above I have been through other vineyards as well as my own, and find that some of the vines, especially the Gray Riesling, have been attacked by another trouble. The branches have turned a dirty brown, and I believe will all fall off. This is caused, I suppose, by too much rain. The weather has been so cold that the vines have not grown an inch in three weeks.

P. C. Rossi, Italian-Swiss Colony, Asti.—There is nothing to report as regards frosts since my report in your last paper. But the growth of the vines has been greatly retarded by the cold and wet weather. They are no further advanced than over a month ago.

NAPA COUNTY.

F. B. Mackinder, editor "Star," St. Helena.—At a meeting of the Wine Growers' Union, on the 7th, the damage done by the late frosts was thoroughly discussed. It was the universal opinion that in the heavy-bearing valley vineyards, from 70 to 75 per cent of the prospective crop has been destroyed, and on the hillsides and on Howell Mountain, where heretofore frosts have been unknown, at least 35 per cent has been destroyed, of what is always a light crop. Our valley vineyards bear from eight to fifteen tons per acre, good crop years, while hill vineyards only yield from four to six tons. So you can

see that the crop of 1892 will be hardly worth gathering, especially so unless there is a material advance in prices. The meeting Saturday was very largely attended, and the following resolution was unanimously adopted:

"WHEREAS, The general frosts which have visited this State have reduced the coming crop of grapes to a fraction of its usual amount; and whereas, the stock of wines now on hand in the producers' cellars is insufficient to supply the trade for the present year; therefore be it

"Resolved, That it is the sense of the viticulturists of Napa County, in mass meeting assembled, that the price of sound wine of the vintage of 1891 should now be raised 33 1/3 per cent, and to that end we urge all producers to hold their wines at the most recently named figures."

L. Kortum, Calistoga.—The damage done by frost in this vicinity, so far, is estimated at from 66 to 75 per cent, while valley vineyards in some parts are ruined. Usually most of the vineyards on the higher localities escaped with little damage. It is very difficult to make a fair estimate until after the blossom.

S. Brown, for James H. Goodman & Co. Vineyard.—I, with others last week, after all the severe frosts, examined a large portion of the vineyards in this valley, and, in my judgment, this valley will not produce one half the crop of last year, and it may be much less.

Viticultural Commissioner E. C. Priber, Napa.—In answer to your inquiry of May 9th, beg to state that I have been quite anxious to ascertain the loss sustained by the recent frosts in Napa Valley, and have convinced myself that the loss is heavier than any we have had by frost within the last ten years. Most of my information, naturally, I could only get from others, as it is impossible to visit every vineyard personally. I think the statement made at the wine growers' meeting Saturday, May 7th, is very likely the result of thorough investigation. It claimed a loss of 75 per cent in the valley. Only very few of the lower vineyards are saved. The destruction is so much more universal, and no general efforts had been made to protect the vineyards against frost. I know of only one instance where it was done systematically, and that was in Mr. La Rue's vineyards at Yountville, where they burned in one night two hundred fires, and saved by doing so every vine. Usually this vineyard is very apt to be damaged by frost. In Solano County several vineyards were heavily damaged, but, as usual, the loss is very unequally divided. Mr. Briggs' vineyard, apparently all on the same level, was bitten considerably on one side of the railroad, and the other side was entirely saved. There is no question in my mind, that as a whole, the losses in my district are very heavy; but if by this short crop the market is influenced enough to raise the price of grapes to a figure which gives a living to our wine growers, the loss will be felt for only a short time.

G. Mighavacca, Napa.—I am unable to state, at the present time, the actual damage done by frost, because I have just returned from my Eastern trip, but shall in future give you a definite answer, if possible, for your valued journal.

Charles Krug, St. Helena.—I refer to my last report about the effect of the frost on the vines in the vineyards of Napa County. We all agree that over half of the crop is gone; I suppose at least 60 per cent. Near Rutherford, and farther down the valley, a great many vineyards lost over 75 per cent. Last night again (May 11th) a heavy frost hurt many of the blossoms. In former years, when grapes and wines brought good prices, we have often proved that, with heavy smoke with tar, straw, etc., damages by frost in our vineyards were a great deal lessened, and sometimes even prevented. Lately, low prices of wine persuaded us not to go to extra trouble and expense for that purpose. But energy, and faith in future improvement of our business, encouraged Mr. C. L. La Rue, of Yountville, to try to save his grapes by a practical way of smoking on a large scale, and he is now found to have won the battle. Besides smoking, there is another way to create some protection for a good many vineyards against the effects of frost by planting, on the northwest side of the vineyard, trees in one, or better, two rows, such trees whose leafage furnishes, during April, sufficient protection. The best proof of this fact can be found at Judge Stanly's vineyard, at Suscol, and also on a place in the upper part of Napa Valley. Very likely, eucalyptus is the best tree for that purpose.

Louis Ziergib, St. Helena.—My vineyard being situated about six hundred feet above the valley, beyond the frost line, has not been damaged at all. I have examined several vineyards in the valley and found that many vines which have been frosted on their fruit-bearing shoots, and are yet in apparently green condition, will not bear any first crop this year, as the fruit on such vines will fall through during its bloom. I estimate the damage in Napa County at about 50 to 60 per cent on the first crop.

H. W. Crabb, Oakville.—In answer to your inquiry, would say that fully one half of the grape crop has been destroyed in Napa County.

J. H. Wheeler, Bello Station.—My own vineyards are on high ground, and only damaged about 25 per cent, while the crops on those areas on low land near me are totally destroyed. The frost will cost Napa and tributary valleys two thirds of its crop, and of the remaining one third the phylloxera and thrip—the ravages of which latter were unprecedented last year—will take half.

H. A. Pellet, St. Helena.—A meeting of the grape growers of Napa County was held last Saturday (the 7th). Representatives from every part of the valley were present. The extent of the damage done by the late frosts was put down at 70 to 75 per cent. The valley is swept from end to end. Conn and Chiles Valleys fared no better, as also Howell Mountain. The only vineyards that escaped are those lying on the western hills, and constitute but a fraction of the whole.

S. P. Connor, St. Helena.—The damage by frost to date is about 10 per cent in this vicinity. Would not count on more than a quarter of the usual crop, as the vineyards that are only slightly frosted will likely drop half the grapes when they bloom. I think Santa Clara and Sonoma Counties will have the same result when blooming time comes.

SAN BENITO COUNTY.

William Palmtag, Hollister.—Frost did no damage worth mentioning to my vineyard of one hundred and thirty-five acres, although about half of the vineyard of Mr. Bolado, of about thirty acres, has been damaged. There are no other large vineyards in the county. There are now about seventy thousand gallons of wine in this county.

SAN JOAQUIN COUNTY.

George West & Son, Stockton.—The damage to vines in this county is at least one third. All the vineyards planted on low lands have been damaged to the extent of two thirds to three quarters, and in some cases there will be no crop except what few bunches will appear on the shoots that will start hereafter. Vineyards on higher lands are not damaged at all, especially where the vines have been pruned long and tied up straight.

CONTRA COSTA COUNTY.

B. H. Upham, Glorieta Vineyard, Martinez.—No damage whatever by frost at my place, or in the Alhambra Valley.

Frank T. Sweet, Alhambra Valley, Martinez.—In the Alhambra Valley, comprising some one thousand acres of vines, there has been absolutely no damage by frost to date. There are reports of damage, however, in the Ignacio Valley and Pacheco district. The season is at least two weeks backward, and there is great need of warm weather to develop the vines, which, though vigorous and free from mildew or disease, are backward.

J. D. Buck, Mount Diablo Vineyard, Clayton.—Your circular of May 9th received, and I forward answer with pleasure. The Mount Diablo Vineyard contains one hundred and thirty-five acres in vines—thirty-five acres all level, balance rolling. The thirty-five acres on the lower level are planted in Mission, Black Hamburg, Zinfandel, and Mataro, and used to bear about two hundred and ten tons of grapes. The frost has damaged this piece to fully one half, say about one hundred tons. The hill vineyard has only a few vines here and there damaged.

R. C. Terry, Clayton.—In this section the damage by the late frosts I estimate at 33 per cent. Some claim 50 per cent. A short crop this year is certain, and we may get nipped some more this month.

FRESNO COUNTY.

Herman C. Eggers, Fresno.—We have had a light frost and very little damage has been done. In some places in this valley the frost has been more severe than in others, but no great damage has been done. In most places where the frost appeared and nipped off a few twigs and bunches, no real harm has been done, as those bunches that are frost-bitten would have had to come off anyhow, or would have fallen off afterwards, as the vines being so full of bunches would not have been able to have brought all of them to maturity.

LOS ANGELES COUNTY.

Sierra Madre Vintage Co., Lamanda Park.—The vines in this vicinity have not been injured by the frost, and so far the outlook is very good.

L. J. Rose & Co. (Limited), San Gabriel.—Since our last communication to you, we have been blessed with a good rain. This, had it been unattended by quite a heavy hail-storm, would have been of incalculable benefit. As it was, we are, however, afraid that the vines were as much injured by the hail as they were apparently benefited by the rain. There are still so many contingencies liable to arise that we cannot predict the probable outcome of this year's crop. At present, we are inclined to believe that the crop will fall short of that of last year.

SANTA CRUZ COUNTY.

W. H. Galbraith, Manager Santa Cruz Mountain Wine Co., Santa Cruz.—I cannot answer for the entire county. In the hill districts very little damage has resulted from frost, and there is a prospect of a full crop. Of the vineyards owned by our company none have suffered to an extent worth noticing. I understand, however, that some vineyards in this county—those on low ground and in sheltered localities—have been considerably injured by the late frosts.

John A. Stuart, Stewart, Etha Hill Vineyard, Santa Cruz.—I said in my former report that vines in the valleys or low-lying lands were killed, meaning killed so far as a crop worth much for this season is concerned. I have nothing to subtract from that. I said, however, that the vines on the hillsides have been injured to the extent of having all suckers and fruit branches in juxtaposition to the ground nipped more or less badly. Even some fruit branches at fifteen to eighteen inches above the ground, and on wires, have been nipped. To put the damage down on hillsides in its practical form, I should say that it amounts as sure now to 10 to 15 per cent at least. If the frost has gone further

than eight sees at present, and has much weakened the vine, coulure will certainly come, and the loss will be heavy. I see but a disappointing fruit prospect for the winter, and a gloomy one for the vigneron, and every day is intensifying this. The weather has gone clean wrong.

George A. Bram, Santa Cruz.—Vines are looking well in our section (Glenwood). Frost did no damage there.

SACRAMENTO COUNTY.

Natoma Vineyard Company, Natoma.—No damage by frost that we are aware of.

Henry Mette, Folsom.—No damage done by frost. Vines all in good condition. A bright prospect for a good crop.

S. S. News, Sacramento.—In reply to yours under date May 9th, will respectfully say that the apparent damage to vines in this vicinity is light. Unless we have another heavy frost the grape crop will equal last year's production.

SAN DIEGO COUNTY.

G. F. Merriam, Twin Oaks.—There has been no frost in this portion of San Diego County since the 19th ult. My report of damage by that frost did most damage on Carignans, and on very low land. Muscats did not appear to be damaged much anywhere, nor any of the vines out of the lowest valleys. This is from seeing over twenty vineyards since the frost.

MR. R. H. DELAFIELD: I would like to state for Knights Valley that there are between 350 and 400 acres of vineyard there, and I don't think there are over 60 acres in the whole place that will have any crop at all.

MR. LA RUE: I hear no report from Yolo County. I have a vineyard there also, and I am sorry we did not take some precautions against frost. One night we lost about fifteen acres, injured 50 or 60 per cent. Every vineyard around Woodland has the same difficulty. The Sacramento report was only from three points; the damage was very considerable all over the Sacramento Valley, and they will lose from 50 to 60 per cent.

MR. DELAFIELD: I can report from the upper end of Napa Valley, at Calistoga, that the damage was far greater than anything in your list. The vines that have been bitten will not have over 15 per cent. The viticulturists are tearing out their vineyards more than ever.

MR. LA RUE: I visited the Napa Valley a week ago last Sunday, and took a drive. My attention was called to the fact that where they had trees growing on the northwest side of vineyards, that immediately below those trees the vines were protected, while on the north side they were worse frosted than other portions of it. The vines in my vineyard, in Yolo, which were affected, were mostly Zinfandels. Right near them the Burgers were not so much affected.

MR. DELAFIELD: Is the question open for discussion?

THE CHAIRMAN: Yes, sir.

MR. DELAFIELD: I think that any unclean vineyard will gather frost; any vineyard with weeds will take frost quicker. Wouldn't the fact that one side of your vineyard was next to a grain field tend to gather frost?

MR. LA RUE: I have an idea that perhaps it was that, but I think it was more the location of the land. It was lower than the rest of the vineyard.

A VOICE: I understand, then, that next to the grain field it was more frosted?

MR. LA RUE: Yes, sir.

A VOICE: Well, you can't blame growers for wanting to pull up their vines, when they have to sell their grapes for \$8 or \$10 a ton, and at the same time they can get \$12 or \$14 for hay.

PROF. HUSMANN: Judge Stanly has all his vineyard, and also his

orchard, say in fifty-acre tracts, surrounded by a row, and sometimes a double row of eucalypti, and he stated to a gentleman and myself that that was a complete protection to his vineyard; that his neighbors who were without that protection had their vines frosted. How they came out this year, I cannot say. He also stated that there was no particular detriment to the trees and vines from the eucalypti, and I satisfied myself that there was very little, if any, difference in the growth of the vines or trees near the eucalypti from those farther away.

A VOICE: How far were the vines from the trees?

PROF. HUSMANN: About twenty feet, so as to make a place for turning. Now, this is in contradiction to something that is generally assumed, that the eucalyptus is very bad, and damages every other shrub close to it. I have convinced myself that such was not the case. Here the trees are from eleven to thirteen years old, and some of them, he told me, measured one hundred and twenty-five feet. He has cut several of them, and I begin to believe that there is a good deal in the policy of having eucalypti, or other fast-growing trees, for the protection of vines.

MR. DELAFIELD: Did the vines near the trees bear as much as the vines farther away?

PROF. HUSMANN: He told me they bore as much. Our vineyard has been frosted twice. It was frosted early in the season, and we went over it in 1887, cutting off and pruning off all the free wood, and by that we secured a very fair crop—in 1887 that was—and we did the same this year again, not interfering with the growing wood from which we expected our crop, but the vines have been frosted again, so how they may come out I don't know. I think this warm weather will show us. Besides, I think it is altogether too early to begin to estimate the damage. Vines have great recuperative powers. We also know that clean vineyards are better than dirty ones, but I think it too early yet to estimate the full damage. In a week from now we will know more what we are about than we do now. Another idea which I have not heard advanced is that when you pass a vineyard that looks clean from a distance, and apparently not much damaged, you will say: "Oh, that vineyard wasn't hurt." But if you examine closely, and find the tops of the roots just touched by the frost, then you will know that that vineyard has been damaged, because the bloom will all drop off. I would much rather depend on the second shoots, which come out by the side of the main shoot.

MR. T. S. GLAISTER: As regards the damage by frost, I think it is too soon to estimate what has really been damaged; my vineyard has not been touched by frost at all; I have one hundred and fifty acres that are not touched. Yesterday I thought I would make an examination, and to my great astonishment I could see no effect from the frost. I found it had not touched the flower buds. I also find that the gum trees are a great protection if they are properly planted. They do not protect the vineyard from wind, but are good in the case of frost. In going over other vineyards than mine I am told they had frost, and the vines are damaged, and it will take at least a week before we can decide what crop we will have.

THE CHAIRMAN: I wish to say, gentlemen, as there has been considerable discussion about eucalypti, that Judge Stanly came down after the last frost two weeks ago. He asked what damage from frost had been sustained, and we all answered that we had had frost, but to what

extent we did not know. He said he had never suffered from frost in his vineyard before. He said that when he discovered that it was getting cold he went out about 2 o'clock in the morning and commenced firing, and that after all he lost about 25 or 30 per cent.

MR. LA RUE: Upon that question of eucalypti, the question was asked if they did damage the vines. My experience has been on the other side. We have a row of trees alternating black walnut and eucalypti. The first row of vines is twenty feet from the trees, and the vines are twenty feet apart. Now, from the first three rows we don't get one third of a crop, and last year I sold my Burgers for wine. I had to guarantee 33 per cent of sugar—and I was satisfied they would make that—but by gathering those three or four rows I was docked one carload of grapes. This reduced the percentage of sugar in that lot of grapes down to 21 per cent. As to being a protection from frost, I can't say that. In the southwest corner of my vineyard I have a few that were damaged from frost right near the trees, and four or five years ago that happened. This year those near the trees were not frosted. The theory that my own advances for that is that the trees on the north side broke the frost and the wind, but I don't think that cuts any figure. I think it is the lower ground that causes the loss.

A VOICE: Was there any difference in the cultivation of your vineyard, as to where it was frosted and where it was not frosted?

MR. LA RUE: No difference, except as I said awhile ago. Part of it was cultivated that day. That was the only difference.

A VOICE: You have never had any experience where you have left it with a smooth surface, as distinct from where you have left it with a rough surface?

PROF. HUSMANN: In respect to this, I wish to say that it wasn't my experience that I gave of the eucalypti, but what I got from Judge Stanly. In a measure we already know that vines do not do well under black walnuts, and I would think that the black walnuts had more to do with it than the eucalypti.

MR. LA RUE: In answer to that I would like to say that possibly the shade has a great deal to do with it. We have not any too much moisture at any time, and the shade would affect the sugar, but you cannot convince me that the growth of the eucalypti will not.

MR. DELAFIELD: I agree with Mr. La Rue that the growth of the eucalypti will prevent the growth of the vines. I have had to root out several trees and throw them away. I have a row of eucalypti planted by a neighbor of mine, and I think they hurt me, and further, I don't think the damage can yet be stated, not only from the frost, but from this hot weather that has just come up. It is going to make the blossoms drop off, and the crop is going to be damaged.

THE CHAIRMAN: We only judge by appearances.

MR. E. C. BICHOWSKY: As far as the southern part of the State is concerned, I can say that we are with you; although we have not been affected by the frost and phylloxera, we have, nevertheless, suffered very much from a disease, the name of which to this day is not given. Some call it "Anaheim disease" and some call it by other names, but we are aware of the effects of that disease, whatever it may be. In the past year the disease has not been as bad as usual. We had a storm early in the season which injured us. We are certain that the disease is still with us. We have lost from that disease on our property about one hun-

dred and sixty-five acres. Last year several experiments were made in different parts of Southern California, of replanting vines on land which had formerly grown vineyard and which had died. I fell in line with the experiment, and set out fifty acres of Mission. They did well, and are apparently as healthy as any year-old vines could be. Notwithstanding that I think the Missions are doing well, we see that the Seedless Sultana seems to be affected, and we have condemned two large lots in our vineyard. We also noticed that the Trousseau is more affected than ever; it has lost strength, and I have come to the conclusion that the disease is not a thing that can be opposed.

MR. HAINES: I would like to inquire how this disease progresses.

THE CHAIRMAN: And is there no vine that resists it?

MR. BICHOWSKY: No; but the Burger shows very little sign, and the Blaue Elba shows no sign.

THE CHAIRMAN: I want to hear about the prospect of the vintage in Tehama County.

CAPT. MCINTYRE: In regard to that I can only say that the frost damage has been equal to about 50 per cent of an average crop, so far as I can see, judging from a careful examination made on Sunday and Monday last. I have thought that we might get away with 33 per cent, but I have made a very careful examination, and I think it is equivalent to 50 per cent. We have made no particular efforts to prevent frost. We have done no smoking, or anything of that kind, although I am a thorough believer in that. The size of our vineyard precludes anything of that kind. I don't know if I can give anything in the way of particular information, because we are comparatively isolated. We are out of the regular range of vineyards, and our products are confined to certain wines and brandies. I don't know that I can say anything that will give any information about the handling of grapes and dry wines. As I say, no particular efforts have been made to prevent the frost from injuring us.

MR. HARASZTHY: Mr. Chairman, I can add nothing to what Mr. La Rue said, except that we have had no frost, and never have had any. We have none on our place, except possibly one hundred vines, which have been affected. The only damage we had was some to orange trees planted on low ground. I have been around a radius of ten or twelve miles about us. First they thought it had hurt them; and on this side of the Sacramento River, the west side, there are quite a number who say that it will cost them about 15 per cent, but on the other side of Cache Creek they say the damage is very great. I am talking about a district now not touched by Mr. La Rue.

MR. E. W. MASLIN: I haven't been in Placer County for some time. I was around my place about two weeks ago, but we hadn't been touched by frost, except on places lying low. I have not heard any complaint at all from Placer County. I think Placer County people are very silent when they are hurt, and talk a great deal when there is little the trouble. Some time ago I made an examination into the cause of a crop dying, and I found it was covered with some little white specks or insects.

MR. DELAFIELD: The subject seems to have changed and got onto the subject of insects. In the northern portion of Napa Valley they have them there, and when you shake the vines myriads of fine little insects come away. What the result is, where they come from and where they

nobody seems to know. It is not one vineyard alone, but several of them.

THE CHAIRMAN: I suppose that is what we call the thrip; it is very bad in Napa County.

MR. HARASZTHY: The Burger has the most of them on it. It eats the leaves and exposes the fruit to the sun. There is a report made by the Viticultural Commission on this subject.

THE CHAIRMAN: The best remedy for the thrip is to destroy them during the winter season. They live under the vines, and the most favorable time to kill them is in the winter season.

PROF. HUSMANN: A good time, also, is in the fall.

MR. HARASZTHY: We turn a band of sheep every year in the vineyard, from a week to four weeks, and we find that is the most available way. Last year we put in the sheep a little late, and we have some thrip this year. In our vineyard, before we got the sheep, four years ago, we were just flooded with these things.

CAPT. MCINTYRE: In relation to this, I would say that we practiced the same plan, and found the results all that we could desire. Last fall we had about eighteen thousand sheep running over the vineyard for a short time, but not allowing them to run after the ground had been softened by the rain. We have been troubled very little, and we attribute it to that fact.

PROF. HUSMANN: In regard to this sheep business, I will also state if care is taken, and they are not allowed in too late after the ground is softened, their droppings are good manure, and instead of impoverishing they improve the ground.

MR. HAINES: I would like to call the attention of the Viticultural Convention to one or two effects of frost. Several years ago—the vineyard which I have is on high ground—but two or three years ago the frost bit the high vineyards and the low vineyards were always free.

MR. LA RUE: In hearing the reports, I see that Mr. Priber speaks in reference to the vineyards in Napa; that while the old vineyard has never suffered, the new vineyard has. We have been to considerable expense at grafting so far, and my son prepared to prevent any damage, if possible, by preparing to smoke. When the thermometer fell to 34° he started the fires, and right through the section of the vineyard where he fired very thoroughly—where he had his best fires burning—it touched 38°. He had two hundred fires, and he wrote me the next day that I hadn't lost a single vine. I went down there the following Sunday and went through it, and there wasn't a shoot in that old vineyard that was touched at all. I believe that was the effect of the smoke.

MR. C. J. WETMORE: I would like to hear from some of these gentlemen about the price of wine and grapes.

THE CHAIRMAN: That is very speculative. Mr. Haber is here, and he is on the regular list for a speech on wine storage.

MR. F. A. HABER: Gentlemen, I have been asked to speak to you upon wine storage as a relief for the past and present depression of our wine industry, and before starting on that subject I would like to call your attention to some of the causes that have led to this past and present situation.

A peculiar anomaly has been presented to me in an examination of statistics just issued by Bonferts, of New York, and which I think will prove interesting to those who have not seen it. It shows that since

1875, up to the vintage of 1891, there has been an actual shortage in the world's wine product of 1,000,000,000 of gallons, or one thousand million of gallons, the greatest deficit being in France, which produced in 1875 twenty-two hundred and thirteen and odd million gallons, or over 2,213,000,000 gallons, and in 1891 875,684,000 gallons, including the product of Algeria, where viticulture has only been known for the last ten or fifteen years. Germany follows next; in 1875 her production was 171,000,000, and which has fallen to only 13,427,091, Italy, Spain, and the United States being the only wine-producing countries showing an increase.

This is certainly food for reflection for you, gentlemen. Now, notwithstanding the enormous increase in the world's population, and hence increased consumption, the problem presents itself, how can we reconcile this anomaly? There are two solutions to this problem: The first, and which I believe plays a very small part, is the increased consumption of beer, and principally in the wine-producing countries. Up to the beginning of the present decade, beer was not drunk by the better classes of people in France or in Barcelona, and I have statistics to prove that the consumption of beer in Paris to-day is nearly twice as much as the consumption of wine, caused by the absence of the smaller or Bourgeois wines, or the *petits vins*, which were within the reach of the ordinary or even better classes, because wine to-day, and when I speak of wine I speak of any good wine, is a luxury in France, as I have statistics in my possession to prove France last year imported 244,000,000 gallons more than she produced, and she imported that for her own consumption. Another remarkable fact, which perhaps is unknown to some of you, is that the city of Paris last year consumed nearly three times as much wine as the whole of the United States of America. It shows you to what straits the French people are to-day for a good natural wine. The same will rule in the principal city in the wine districts of Spain, that is, in Barcelona; the importation of beer is something immense. The wine has deteriorated to such an extent, in fact, that we know that the Spanish Government has imposed a high tariff on the importation of spirits from Germany and all other places, in order to stop the wholesale adulteration.

But, gentlemen, the most important fact and the most pernicious factor that we wine growers of California, and the wine producers of the world, have to contend with is the manufacture of fictitious wines. Statistics which I have gathered from our consular reports in 1889, show that France manufactured 5,000,000 hectolitres, or nearly 130,000,000 gallons, of fictitious wine, made from pomace or from dried grapes, Zante currants, or any other available fruit product producing alcohol. Just before leaving here I had the good fortune to see a file of the "Moniteur Vinicole," a French paper, which places the production of fictitious wines in 1891-92 at nearly 140,000,000 gallons; but that does not take into consideration the gallicized adulterated wines produced in Germany, and for which Hamburg is the great market.

Now, gentlemen, these adulterations in Europe and the adulterations in this country are one of the most important features and most pernicious factors that we have against our wine industries, and the only cure, in my opinion, is the enforcement of our legal pure wine laws, which you will find in every State in the Union, but which, like ours, is a dead

better; and we must also ask for a national pure food and liquor law. [Applause.]

In France and Germany it is a felony to sell an adulterated wine unless labeled such. In 1879 (I quote from a gentleman from Hamburg, Germany) the increase in the production of fictitious wines grew to such an enormous extent that the German Parliament was petitioned by the wine growers asking for its abrogation. This same gentleman, who was here the other day, had an establishment at a place called Kippenheim, which occupied an enormous area. They built an immense cellar, and had an immense establishment for their business, which amounted into millions of cases, and made wines from dried grapes and everything that would make alcohol. In 1879 the German Parliament passed a law compelling these people to put a label on this product—*artzwain*, or artificial wine—in sufficiently large letters and such prominence to draw the attention of even the uneducated to this label. The consequence is that to-day this establishment in Kippenheim can be bought for one cent on the dollar, because it did not pay these gentlemen to move, and their vocation, like Othello's, was gone. I have that on the word of a gentleman in the city to-day. This will show you to what an extent this adulteration has gone, and to what an extent the governments of those countries have protected the consumers' pockets and their health. Unfortunately, in this country there is no protection for the honest wine dealer, and good California wines are generally sold, and I may say mostly sold, under fictitious foreign labels, because we Americans are such snobs that we don't think anything fit to eat, drink, or wear that doesn't bear the impress of a foreign label. [Applause.] And when we succeed in educating the American to drink American wine under an American label, I think, gentlemen, that one great victory against this adulteration will be achieved. We have got to educate our own people to appreciate our own wines, and not allow the story to go out broadcast that we cannot make good wines, and at the same time walk down Broadway or Sixth Avenue, New York, or State Street, Chicago, and see our wines sold under foreign labels and drank as such. We have got to have our California wines sold under their own name, and with the name of the country of their production.

As for the future of our wine industry there is some hope, when we take into consideration the tremendous deficit in the production of natural wines and the substitution of light fermented wines against whisky and spirits. When we can make that substitution we are going to settle a very important question in this country, and I am glad to say, gentlemen, that the whole country is taking up this question and pondering on this subject. I would like all of you gentlemen to buy a copy of Frank Leslie's of the last issue; they have devoted about six to twelve columns on the substitution of light wines in the place of "horizontal," or whisky drinking.

Now, as I said, when we take into consideration this immense deficit in the world's production, and when we look over our broad land here, where every foot of ground is susceptible of viticulture, what promise does it give us for the future? I know that these ideas are roseate, but, gentlemen, I do believe that if we can hold out, if we can preserve our vineyards, if we can avoid this clash between the producer and the wine merchant, if we can have more cohesion, more coöperation, so that we can come together and advertise our resources in this country in a

viticultural sense, we are going to attract the wine growers of the whole country to this favored ground. They are coming now from France and Germany to replenish their cellars, and it only depends on you, gentlemen, to find out what these people want.

I can tell you that I was a party to a contract for 300,000 gallons of red wine for export to Certe, France; it was shipped and gave satisfaction, and an order for 600,000 gallons more followed; but, unfortunately, the McKinley bill caused a retaliation on the part of France, and I am sorry to say that to-day the French Government has refused to place American wines on the same basis of tariff as the most favored nations. I am afraid that unless something is done towards reciprocity with France that that trade is shut off from us, at least for the present.

I was visited a few days ago—only yesterday, in fact—by a gentleman who was the distiller of Martell & Co. for ten years, and he says he has brought his still with him, and proposes to make cognac in this country, "because in France," he said, "we have no means of producing it, as we have not the grapes. I want, first, some encouragement from some large concern to show that we can produce cognac."

However, I don't think that in the history of the viticultural interest that the market has been so depressed as it is to-day, and furthermore, in view of the short crop, the market has shown no improvement, but it may come a little later.

Now, gentlemen, I ask your kind indulgence for this little digression that I have made, which leads up to the subject that I wish to speak to you about.

It is a well-known fact, and a very sorrowful fact, that the majority of the viticulturists of California are lacking the means to find a market for their products. There is, I believe, a remedy for it, and that is the institution of a warehouse and collateral bank system, such as have been conducted in France for the last two hundred years, and which have been both financially and commercially immensely successful. We will take, for instance, the establishment known as La Villette, which is not far from Paris. It is a stock company with a certain amount of capital, and which provides storage, and which is conducted in the following manner: This company, at the beginning of the vintage, sends out announcements that they have room for so much wine; the applicant who wants and applies for storage, states how old his wine is, and how much he has. The warehouse concern sends their expert to examine this wine; it is tested for its strength, for its keeping qualities, and when accepted the cooperage is sent for it, it is brought into the warehouse, and it is given a place. If it is red wine, it is given a temperature for red wine; if it is white wine, it is different—every wine where it belongs.

Now, as I said, attached to this warehouse is a collateral bank; the bank loans this man a certain amount per cent upon his wine, charging him a nominal rate of interest. They keep that wine there as long as that man wants it kept; he has to pay for the racking, and he has to pay so much rent per month for the storing of the wine, and that wine, when it is received in this warehouse, gets its birthmark; it is like whisky when it goes into a bonded warehouse, and like brandy or anything going into the London docks. Then you see that the security which the bank has is constantly increasing in value to the bank, because that security is being taken care of by practical and experienced wine tenders, and that is the reason to-day, gentlemen, why it is

so difficult for any of us to borrow money from our banks, as they will say, "It is perishable," and to lend money on wine in your own warehouse is simply illegal.

Now, another duty of this warehouse system and collateral bank, is that it will act to control the price of wines in the market where they are produced.

Let us take for illustration, suppose we should be able to inaugurate the same system here. We have in California, I believe, nearly seven thousand grape growers; then we have nearly three or four thousand who devote their grapes to wine growing, and out of those four thousand we have, I believe, seven hundred wine makers. Now, suppose we can institute the system alluded to on the cooperative plan, and that is the only way it can be done; suppose every man interested in grapes should take \$100 worth of stock, you would have right off \$700,000 to commence with. With \$700,000 you will have sufficient money to buy at least a million to a million and a half of cooperage, and still have a reserve fund of nearly half a million dollars to start your collateral bank. That is the result if you start under the cooperative system. With one million, or two or three million gallons of wine, you will be able to make market here, and also make the price here. Before the beginning of every vintage, or say every year, as they do in France and Germany, let notices be sent throughout the world that there will be an auction of two or three million gallons of wine; it will draw to your city every man who buys ten or twenty or fifty thousand gallons of wine, and San Francisco will make the price for it.

Now, gentlemen, the only way that this movement can be thoroughly and successfully inaugurated is upon the cooperative plan, and I am satisfied that when it has been thoroughly and fully discussed you will find that it is possible. It will be not only a relief to your market, it will be not only a relief to the grape growers, but it will have the effect of systematizing the business and placing it in a normal condition, and attract not only the wine buyers, but also those who are interested in viticulture from all parts of the world. I am very much obliged to you for your attention. [Applause.]

MR. P. C. ROSS: I have got a resolution that I want to introduce to this convention.

[This resolution censured certain dealers not named for engaging in cutting prices to ruinous rates in the New Orleans market.]

MR. HAINES: It seems to me that that resolution is a little bit out of order, because I haven't heard of any effort to lower the price of wines.

MR. ROSS: Yesterday morning I was conversing with several gentlemen, wine producers, and they said: "Here we meet and talk about growing, etc., but where we are most interested nothing is said. We are on the verge of starvation, and if we don't say something now when we are in the convention when shall we say it?" Every one knows the condition of the market; the crop was short last year, and it is short again this year—shorter than ever before. The prospect this year is certainly not very good, and that is the reason (when I heard this gentleman from Santa Clara County ask what would be the effect of this on the shrinkage of market values) I thought it was best at this time to introduce this resolution. Everybody knows that the price of wine has been so low that nobody can make a living. Now, if the wine makers all through

the State would combine like the Napa Valley wine makers have, I think it would be a good idea.

THE CHAIRMAN: Mr. Bundschu, can you give us any ideas upon the wine market?

MR. BUNDSCHU: Mr. Chairman, it would be rather delicate for wine merchants to talk about that. We all know that attempts have been made to depress the market. I don't know what the motives have been, and it should not have been done. I can't identify myself with these attempts, and I am very sorry for the present condition of the market, and that the leading merchants should have seen fit to reduce the price of wine. I can't see any reason for it.

MR. HAINES: I think the object of this convention has been accomplished. It has shown that the present crop is inclined to be short. We are not intending to sell our wines at the present prices, in view of the shortage. If on the other hand we had in view a large crop, then we would be more inclined to sell. The effect I think would be to make the growers hold on in Napa County, and I presume in Santa Clara County; it will have a tendency to make people reluctant to sell. It will also have a tendency to make the merchants give us better prices. I would have no objection to the resolution, only it is a little bit condemnatory. We have carried one resolution, and I think we should do it in this case. As has been said we can come together and come to some agreement, but I don't think it can be done by saying hard words against each other. I think if the wine merchants of California understand that we can send our wines to other markets they will give us higher prices.

THE CHAIRMAN: Mr. Haraszthy, can't you give us a little information on this subject? You are a wine merchant and a producer also.

MR. HARASZTHY: All I can do, Mr. Chairman, is talk, and I can't do that as well as a great many of the others, but I might give you one or two ideas.

This situation of the wine market for the last four years makes me think of a very good book that was put in my hands for certain purposes, and which I was made to read often and study often—the Bible. You remember the part where, in making their explanations, one pointed to the other. Now, the wine grower is pointing to the wine merchant, and the wine merchant is pointing at the fellow in the East, and the fellow in the East is pointing back at the wine grower; so it goes on continually, but the whole trouble—I am going to give you a new idea—the whole trouble is with the real estate man who induced us to buy, and made us believe that for an investment of \$125 we were going to realize a \$400 increase. The whole trouble lies in the real estate man. A few years ago everybody rushed into the business; everybody planted vineyards, but nobody thought of the production of brandy. That would have been successful, and that has been the only thing that we have been able to make any money at for the last five years. This whole trouble lies in the fact that we have made too much wine, as we have taken out of the ground too much silver.

Now, how can you get rid of it? I have been trying to solve this question, and have been working among the flock for a great many years; I have been with you heart and hand; I am suffering with you; I am suffering now. I feel that I have a vineyard that bears about two tons and a half per acre in the most favorable years, and a ton and a half in

the other years, and I find that if I don't sell most of my wine to the consumers I won't be able to sell it at all, and that if I have to come to San Francisco and sell to the wine merchant, to the shippers, I would be far worse off than I am now. The fact of it is, there ought to be some means of getting rid of this surplus. There was a means offered about three years ago, when it was suggested that the holders of wine combine and distill about two or three million gallons. For the time being that took some shape. Eventually the capitalists brought together found, on consultation with the wine growers, that they were not willing to put in anything, or bind themselves for two or three years, and give all their grapes to this distilling combine. The capitalists said: "You want us to put in the money and you derive the benefits." If it had been possible to carry out this idea something might have been done; but it wasn't. Each of us to-day has some different idea, and we will all go away and leave the work undone. As for coöperation, there is no such thing in small communities. You must take in all the wine growers in California. One thing is certain, you have got to get some means of getting rid of this surplus. We are beginning to get a little market in England and a little market in Germany for our brandies, but that is not sufficient. Why, we have been making 25,000,000 gallons a year in recent years. We will not do so this year. These wines come pouring in from three or four crops back, and generally they are very poor wines, too.

That is the state of affairs. You must get rid of your surplus, but you will not do it by saying you are going to put up a scheme to cinch the trade. I am not taking the part of the trade; they are perfectly able to take care of themselves, and the trade are fighting much more than you think they are. The only way I can see out of this thing is for the distillers to act. For the last year there has been firmness (I don't say an increase) in the price of brandies. There has been a firm demand, and there has been more wine distilled than ever before, but still the demand is active. Make your bad wine into fair brandy, or, at least, as good as you can make it; everybody will do better and nobody will sell, thus relieving the wine merchant as well as yourselves. What the merchant fears now, and he has his complaint as well as you have, is the result of your demands. You go around to the different firms and try to sell your wine and don't do it, and you go back home and remember some Tom, Dick, or Harry in Illinois, or somewhere else, and you make a consignment to him. At the end of six or seven months he calls for \$100 more, to pay freight or something, and the worst of that is that when that wine is sold at a sacrifice it has made a price for the wine merchants of California; it has made a price for the wine in that section. I sell, for instance, port wine for \$1 a gallon—I don't do it, but I would like to. Mr. Jones, or some fellow down here, sends to New York, to some commission merchant, a consignment of port. He sells the port, after some months, at 75 cents—a drop of 25 per cent—and that makes the market price of every other port that is offered there, and the merchant has got to go in and do the same thing.

While we have a plethora of wines here, while our tanks are bursting and our cellars threatening to break down, there is a market that, if we could reach it, would take all we could send them. They are now drinking adulterated stuff, and they are paying high prices for it. I refer to the countries of South America; but the trouble is in the transportation.

Three years ago one of the largest houses in Buenos Ayres, which is said to sell 100,000 gallons a month of Italian wine, asked us to send them a shipment of wine. In looking around, what did I see? I found that to get the wine there we had to ship across the continent and pay 10 cents freight, then $2\frac{1}{2}$ cents across the Atlantic to Hamburg, and from Hamburg 2 cents to Buenos Ayres. That one firm could use 100,000 gallons a month, but we have no communication with Buenos Ayres. It is the same way with Havana and other places. If we could transport our vineyards to the other side of the Atlantic we would not be here talking about prices.

A great trouble, as far as I have gathered, is that when there is a short crop we go down to the wine merchant, as we have done this time, with a cry of a "short crop," and in the East they don't believe it at all. They believe it is a California lie. The wine merchant is in the position of a capitalist—he cannot meet you on this question. He hears of somebody who has been pressed by his necessities, and has sold such and such wine at such and such a figure, and so he sits back and waits until a man comes who is forced to sell. How can he do otherwise? His law is the law of self-preservation, and I think there is a misunderstanding between the wine grower and the wine merchant that should not exist, in the interests of both of them. If it is a fact that this year's crop will turn out as it is said, I think the question is settled. We are actually increasing our exports, we are making more brandy, we are making more raisins, we are sending more green fruit to the East. Raisin making is being overdone, of course, but still it will take that part out of the market, and possibly from that there will be a better state of facts.

A VOICE: What about Guatemala, Costa Rica, etc.?

MR. HARASZTHY: I will answer that question by saying this: that there is a very good trade opening up there, and it is being pushed for all it is worth. But I want to say that if the wine merchants would come together, and make a holy oath that they wouldn't let a drummer go out, but that they would sell from their offices, it would be better. The actual price of wine is made by drummers more than any one else. They are in good financial condition there, and also in the Argentine, in spite of the Baring Brothers' failure; and every San Francisco house is represented now in Central America. At Havana a market has also been established, but the long credits are a very great detriment both in Mexico and in Central America.

MR. LA RUE: You can reach the Argentine by shipping full cargoes of wine.

MR. HARASZTHY: Oh, yes; but what ship would take a full cargo of wine? My attention has been drawn to that. There may be a chance of inducing this new steamship company to stop at Buenos Ayres and take in hides, tallow, etc., coming up, and take back wines. And they could do so without very much delay.

A VOICE: There is one problem that strikes the grower always as peculiar, and that is that he comes to San Francisco and sells his wine for 10 cents a gallon, and afterward when he buys it, he has to pay four bits a bottle for it, and there is an immense difference between the two.

MR. HARASZTHY: I will answer that. I have bought wine within the last six months for which I paid—it was the last vintage—for which I paid \$1 25. The wine that you bottle, if it has the name of any

prominent house, is the best that you have of that particular quality, whether it is Zinfandel or anything else. These wines have to be three or four years old, and the man that bottles wine is taking enormous risks. I can tell you of firms that are selling on six months' time, any quantity that you want, for \$1 90 a dozen bottles. The cost for the beautiful caps alone is \$5 a thousand.

A VOICE: I never struck it.

MR. HARASZTHY: Very well; you come down to my store, and I will show you.

A VOICE: I have been in New York, and seen California wine, beautifully capped and cased, at \$2 10 a case.

MR. HARASZTHY: The trouble generally is this: that your interests have compelled you to dispose of your cellars just as they are. In them you will find quite an amount of poor wine, and you will find some lots of very excellent wine. They are all unclassified, and they are all sold entirely too cheap; and I assure you that if you went down to the bottom of the wine merchants' affairs you would find that these wines don't bring any more on 'Change than the others. But he is selling so low at present that he cannot afford to sell his best wines. Every wine merchant here has some wine that he don't care about selling. He knows that he will get his price some time; but that is rather expensive, and I assure you that wine is being sold in the East for \$2 50 to \$3 a case. Now these Zinfandels, say, must be from two to three years old; they must be racked off, and if you pay rent, insurance, and other expenses, you can't keep them for less than 7 cents a gallon every year. You can figure it down to 4 cents, but in that case a man must own the property and charge nothing on rent account. I know a number of restaurants and establishments here that are paying 6 cents for pints, bottles returned, and 12 to 13 cents for quarts. [Applause.]

CAPTAIN MCINTYRE: I desire to express my concurrence with the last speaker relative to the distillation of our surplus wine, and I desire principally to say that care should be used in this direction. Don't let the wines spoil; don't wait until they are old and spoiled, because the quality of our brandy will be deteriorated, and we will suffer in consequence. Every man engaged in making wine knows what will be good, and what will be bad, and what will be medium. There is no doubt in his mind; but he says, "I will wait and see if anybody comes along who will take it all." That is not the way to do it. When you have wine that is not good for the market, distill it.

We can make good brandy in California. Another point, don't try to make brandy at the lowest possible figure. Whatever you do, go slow. If your distiller says that it will cost you 5 cents a gallon, don't hurry him; make the brandy right; don't attempt to rush it along so as to make it at the lowest possible price. Don't engage a man at \$1 a day to keep up your fires and trust that everything will come out all right. That is not the way; go slow; whatever you do, distill the wine before it is spoiled and you will get a good, sound brandy, and get a good, sound price for it.

THE CHAIRMAN: There is a resolution before the house; we want to dispose of that before we adjourn. I want to say, also, that I concur with Mr. Haraszthy. We are all too willing to place our sins on the shoulders of others. We have done this thing voluntarily. We have planted the vineyards, we have built our cellars, and if we have done

it in excess we have only done what other people have done. Now, as Viticultural Commissioner for the Sonoma District, I have been charged repeatedly and repeatedly with being to blame for this state of affairs. I say that we have not, since the Commission was in existence, advised anybody to plant a vine. And now I say, gentlemen, look at home and see if you are not to blame yourselves. You have planted more vines than you can take care of, and when we ask you to form a distilling company we can't get the capital. I tried here, Capt. McIntyre worked hard, and now what is the use of kicking. We are in a fair way to get a good price for our grapes, I think, from the reports. We see day dawning, and I say hold on; hold your breath and sweep around your own doors, and see that your own doors are clean.

Mr. Rossi: I will withdraw my motion.

THE CHAIRMAN: One more thing, gentlemen. I want to announce the committee that is going to visit the World's Fair Commission. I will put upon that committee Mr. La Rue, Mr. McIntyre, and Judge Stanly. Of course, I have been added on there by the convention.

Mr. BUNDSCHU: I move that a vote of thanks be tendered to Mr. DeTurk as our Chairman, and to Mr. Scott, the Secretary, for their kindness during this meeting.

[The motion being duly seconded, was upon vote declared duly carried.]

Mr. LA RUE: I suppose that we can't see the World's Fair Commission until next month. The Commission will not be in session until the second Tuesday of the month.

THE CHAIRMAN: I suggest that we do our business through the Secretary, Mr. Scott. He will attend to it for us.

The convention then adjourned *sine die*.

APPENDIX C.

THE UTILIZATION OF WINE RESIDUES.

By ANTONIO DAL PIAZ.

[Translated from the German specially for the Board of State Viticultural Commissioners.]

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THE UTILIZATION OF WINE RESIDUES.

INTRODUCTION.

Wherever grape growing has had any considerable extension it forms one of the most important branches of agriculture. Although in most grape-growing countries great attention is paid to the cultivation of the soil and the making of wine, too little attention is, as a rule, given to the utilization of waste products, which, with proper care, can be turned to vast practical advantage. The waste products that permit of the most ready treatment are:

First—The pomace.

Second—The lees.

Third—The tartar which separates from the wine and deposits itself in crusts on the inside of the casks or barrels.

In the principal wine-producing countries of the world these products represent an aggregate value of several millions, but as a rule little use is made of any of these except in the manufacture of cream of tartar. In France, more than in any other country, all of these products are extensively worked, large factories being established for the purpose. Raw tartar is exported from most of the other great wine-producing countries.

The value of these bye-products, and the various methods of working them to practical advantage, have been known for some time. For instance, in the works of the well-known physicist and chemist, Dr. T. R. Glauber, dated 1658, will be found the method of pressing wine from the lees and of producing brandy and tartar from lees and pomace.

But in most of the leading wine-producing countries only a little use is made of the pomace and lees. One of the oldest methods of utilizing the pomace is in making "press wine," which is accomplished by adding water to the pomace, and letting it ferment. Even the old Roman authors speak of the preparation of "press wine" from the pomace, which they called *lana*, and gave to their slaves.

In some places brandy, or a grape spirit, is made from the pomace; in others it is fed to cattle, or used as fuel. In some countries oil is expressed from the grape stones.

But, as a rule, these waste products of the winery and wine cellar are not put to their highest use. The principal point is to extract every valuable ingredient, and not lose one. This can be accomplished in different ways, but also as to give everybody, even the smallest producers, a chance to work up all the residues, and not waste anything. The proper use of these products is, therefore, of great importance to all producers.

CHAPTER I.

PROPER MANNER TO USE POMACE—CHEMICAL COMPOSITION OF POMACE.

Pomace is what remains in the press after pressing is over. It will contain, in spite of the most careful pressing, and with the use of the most powerful hydraulic pressure, a very considerable portion of the juice of the grape, or must, or fermented must, as the case may be, and other substances, such as sugar, etc. The quantity of juice remaining in pomace varies according to the pressure applied and to the sugar content of the grapes originally. Therefore, in good wine years, when the sugar content runs high, the pomace will be found to be more valuable than in the poorer years. Although in one hundred parts of perfectly ripe grapes there may be even 95 per cent of juice, yet it might be said that on the average far less can ever be expressed. Moreover, the juice remaining in the pomace is not the only ingredient. There also remains the skins, consisting largely of cellulose, the common vegetable ingredient, and also tannin; and in the skins of blue grapes will be found a peculiar blue coloring called cœnocyanin, which gets its red color through mixing with acids, and is soluble in diluted spirit of wine and a little tartaric acid. This is the coloring matter of red wines. In the pomace will also be found the grape stones, which have often been analyzed, and which contain from 6 to 7 per cent of tannin; from 10 to 20 per cent of oil, depending more or less on the climate; and also some vegetable albumen and cellulose. The grape stems remaining in the pomace also contain considerable tannin (in dried stems from 6.5 to 7.3 per cent), and also malic and tartaric acids.

The skins may be said to contain vegetable albumen, cellulose, and pectose in the following proportions:

Cellulose	86 per cent.
Pectose	
Vegetable albumen	14 per cent.
Total	100 per cent.

The relative proportion of stones, skins, and stems in the pomace varies with different grapes, their degree of ripeness, and other matters. The ingredients of the ashes of pomace, after burning, are also of importance. These are principally carbonic acid, sulphate of potash, sulphate of soda, chloride of potash, chloride of sodium, phosphate of lime, carbonate of lime, clay, compounds of magnesium, oxide of iron, etc. Dried pomace gives, according to the kind and ripeness of the grapes, from 2.5 to 6 per cent of ash. Of the ingredients of the ash, the potash and phosphoric acid are the most important and valuable. The proportion of the ingredients varies not only with the variety of grapes, but also with the proportion of stones, skins, and stems in the pomace. This can be seen by the following:

THE UTILIZATION OF WINE RESIDUES.

	Pomace.				Skins.		Stones.			Stems.	
	Dried.	Riesling.	Fresh Gutedel.	Fresh Red Burgundy.	Kleinburgunder.	Schönfeiler.	Dried Kleinburgunder.	Dried Schönfeiler.	Dried Red Burgundy.	Fresh Gutedel.	Fresh Red Burgundy.
Ash (total)	6.65	3.04	0.50	0.458	3.745	4.321	2.776	2.837	2.00	1.429	1.667
Potash	36.9	37.00		Chloride of sodium and chloride of potash, 34.55.	32.751	36.942	23.658	23.784		Chloride of sodium and chloride of lime, 33.33.	Chloride of sodium and chloride of lime, 33.33.
Soda	0.4	1.17			1.668	1.275					
Lime	10.7	26.93			15.970	17.121	27.319	28.720			
Magnesia	2.2	5.48			4.723	3.506	7.289	6.937			
Oxide of iron	3.4	0.95			1.657	1.553	0.387	0.523			
Manganese					0.596	0.403	0.296	0.365			
Siliceous acid	15.3	0.87			2.724	2.026	0.809	1.028			
Sulphuric acid	5.4	3.14			2.736	3.059	2.036	2.106			
Phosphoric acid	10.7	21.05			15.396	12.342	22.926	17.001			
Carbonic acid	12.4				9.584	14.035	13.179	16.262			
Chlorine	0.4				0.390	0.562	0.228	0.287			
Sodium chloride		2.05							50.00	23.33	23.33
Phosphate of lime											
Sulphate of lime											
Sulphate of potash									3.50		
Chloride of lime									1.50		
Alkaline carbonate									13.50		
Carbonate of lime			10.91	18.18					17.50	43.33	43.33
Carbonate of magnesia			7.27	18.18					14.00	43.33	43.33
Carbon and sand					12.348	5.491	0.762	1.028		Berthier.	Berthier.
Name of analyst	Boussingault.	Albert.	Berthier.	Berthier.	Crasso.	Crasso.	Crasso.	Crasso.	Berthier.	Berthier.	Berthier.

ANALYSES OF ASHES OF POMACE, SKINS, STONES, AND STEMS.

Mineral Constituents of Ash.	Pomace.			Skins.		Stones.		Stems.
	After Boussin- gault.	After Albert.	After Ber- thier.	After Crasso.	After Crasso.	After Crasso.	After Crasso.	
Potash-----	52.64	37.00	*59.69	41.656	46.887	27.868	29.454	*41.81
Soda-----	0.58	1.99	-----	2.130	1.618	-----	-----	-----
Lime-----	15.26	26.93	22.86	20.315	21.731	32.169	35.567	45.61
Magnesia-----	3.13	5.48	3.78	6.019	5.451	8.527	8.559	-----
Iron oxide-----	4.58	0.59	-----	2.107	1.971	0.445	0.647	-----
Manganese oxide-----	-----	-----	-----	0.758	0.511	0.348	0.452	-----
Siliceous acid-----	-----	0.78	-----	3.464	2.571	0.952	1.273	-----
Sulphuric acid-----	7.70	3.14	-----	2.480	3.828	2.398	2.608	-----
Phosphoric acid-----	15.26	21.05	13.67	19.575	15.665	27.005	21.054	13.20
Hydrochloric acid-----	0.59	1.26	-----	0.509	0.733	0.275	0.344	-----

*Chloride of sodium and potash.

This shows that the potash, phosphoric acid, and lime are the most important mineral constituents of the ash.

CHAPTER II.

WORKING POMACE.

As a rule, only a small portion of the valuable constituents of pomace are turned to practical use. The greater part of the attention paid to the pomace is the extraction of the spirit which still remains in the pomace after fermenting, by making the so-called pomace brandy. As a rule, the oil is not extracted from the stones, but this practice has lately been introduced in Italy, and thence into France, Switzerland, and some parts of Germany. Elsewhere different uses are made of pomace. Thus, in France, particularly near Montpellier and in lower Styria, it is used in the manufacture of verdigris. In other places it enters into the manufacture of potash.

Again, in some places, pomace is used for fodder and manure, but usually it is thrown away altogether. If the pomace is utilized to the fullest extent it will be found that the bye-products thus obtained will defray, in a large measure, the expenses of the winery, and allow the profits on the wine, brandy, and vinegar to be almost wholly net. Large establishments will be found particularly advantageous in working up the pomace. The operating expenses can thus be considerably reduced.

The manner of procedure to realize fully the products of the pomace is as follows:

First—The tartaric acid, which is in combination with lime and potash, is extracted from the fresh unfermented pomace if the must is removed from the pomace before fermentation.

Second—If the pomace is not fermented, it is set in fermentation. From the fermented pomace the brandy is distilled. Distilled and dried pomace can be used in this process for fuel, reducing the cost, and the ashes make a most excellent fertilizer for the vineyard.

Third—If it is desired to extract the oil from the grape stones, they

can be sifted out. After the oil is extracted the stones can be used as a source of tannin.

PRODUCTION OF TARTARIC ACID.

To produce tartaric acid or tartrates from pomace, the fresh pomace is, according to the French system of Von Juette and de Ponteves, taken from the press and placed in large tubs which are lined with lead. Water enough is added to cover the pomace, and a little over. Add first, 2 kilogrammes (4.4 pounds) of concentrated sulphuric acid to every hectolitre (26.4 gallons) of water. Now let hot steam pass through a pipe into the pomace, and let it slowly cook for three or four hours. In the reaction which follows, the lime takes up the sulphuric acid and the tartaric acid is set free. Boiling the pomace in the sulphuric acid does not affect its value for later operations, and, as a matter of fact, some of the cellulose is converted into grape sugar, increasing, if anything, the quantity of grape spirit which may be obtained later. The liquor in the tubs which contains most of the free tartaric acid is drained from the pomace and the pomace itself is thoroughly pressed. The liquor then goes into other tubs lined with sheet-lead. A stirring device is placed within and has to be covered with lead.

Fig. 1

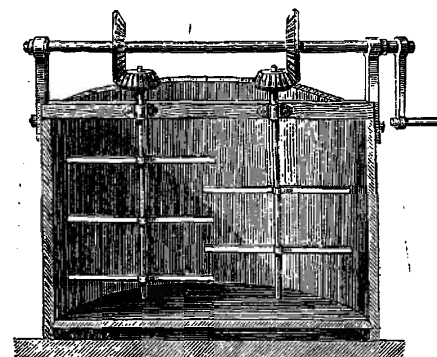


Fig. 1 shows a tub with such an attachment, which is worked by hand, and which can be detached at any time. In large establishments this is worked by steam power. After the liquor has been poured into the tub, lime water is added as long as the liquid shows an acid reaction, meanwhile agitating by means of the stirrers. Blue litmus paper is the best means of testing the state of the liquid. When lime water is added the tartrate of lime is formed, and as soon as the stirring is done it settles to the bottom of the tub. This has afterwards to be thoroughly cleansed with clear water. The lime tartrate can then be sold as such or worked over again. Should sulphate of magnesia be present in any quantity, it may prevent the lime salt from precipitating thoroughly. In this case you will have to pour from four to five parts of water on the pomace and add enough soda to allow the liquid to react neutrally, after having been boiled three hours. This turns the tartrate of lime into carbonate of lime, which separates from the liquid; and the tartaric salts of sodium and potassium remain behind. The tartrate of lime

can subsequently be obtained by dissolving one part of chloride of calcium in three parts of water, and adding this to the neutral liquid.

On the average the pomace remaining from grapes which will produce 10,000 hectolitres of wine will produce 20,000 kilogrammes (44,000 pounds) of tartaric acid so treated. (About twenty pounds to the ton of grapes.)

After having extracted the tartaric acid from pomace, the remaining liquor is again poured on the new pomace. It is best to heat a little before doing so, so as to permit of rapid fermentation, in case the fermentation has not already occurred. The best temperature is from 20° to 25° C. (67° to 77° F.). Closed fermenting vats, such as should be used in the manufacture of red wine, should be used here, to prevent the further fermentation into vinegar. At a temperature of 25° C. (77° F.) the fermentation will be completed, so that all the possible spirit will be formed in the wine pomace.

MAKING SPIRIT FROM THE POMACE AND CENANTHIC ETHER, AFTER HAVING GONE THROUGH THE ABOVE PROCESS.

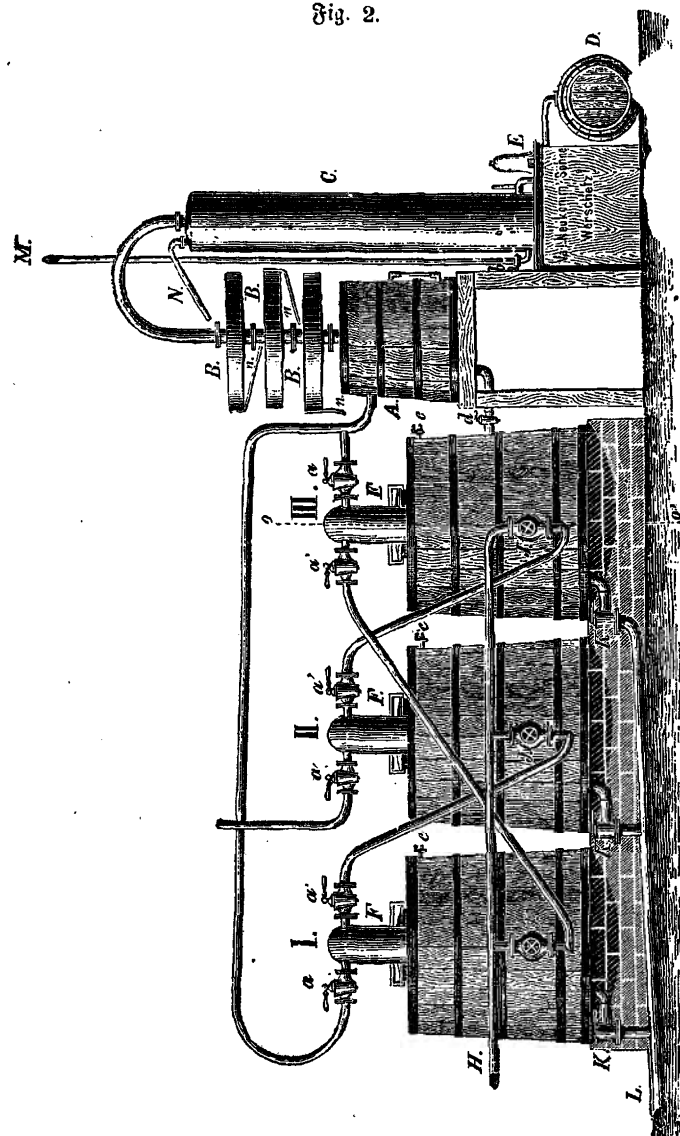
As stated above, the yield of brandy from pomace will be increased whenever the above process is employed, because the addition of sulphuric acid will increase the percentage of sugar. The amount of alcohol remaining in the pomace, of course, varies very much. It depends not only on the amount of sugar originally contained in the grapes, but also on how much they have been pressed and how the pomace has been preserved. As the internal revenue tax on the manufacture of brandy is very high, and as pomace sometimes contains very little alcohol, the expenses of distillation must be made as small as possible, to insure any profit from operations, and the processes must be made as simple as practicable; most of the stills used up to the present time do not answer the requirements of cheapness and simplicity. In their arrangement and operation most of them will be found more or less annoying and wasteful as regards time.

Direct heating in all pomace stills is to be avoided, as liable to burn the pomace; much water has to be added in these cases, and this delays heating and necessitates a large consumption of fuel. Moreover, when the mash is heated in this manner, the pomace must be constantly stirred so as to prevent burning at the bottom of the still. All this can, however, be done away with by using steam for distilling.

To manufacture brandy from pomace on a large scale and profitably, a distilling apparatus must be provided which permits of quick filling and emptying of the pomace, and at the same time will permit of the constant use of the steam and water at the command of the distiller. Wherever steam is used, the copper boilers can be dispensed with and oak or other casks can be substituted instead. Already several well-constructed stills for handling pomace and lees have been devised, and now only those that can be recommended will be mentioned.

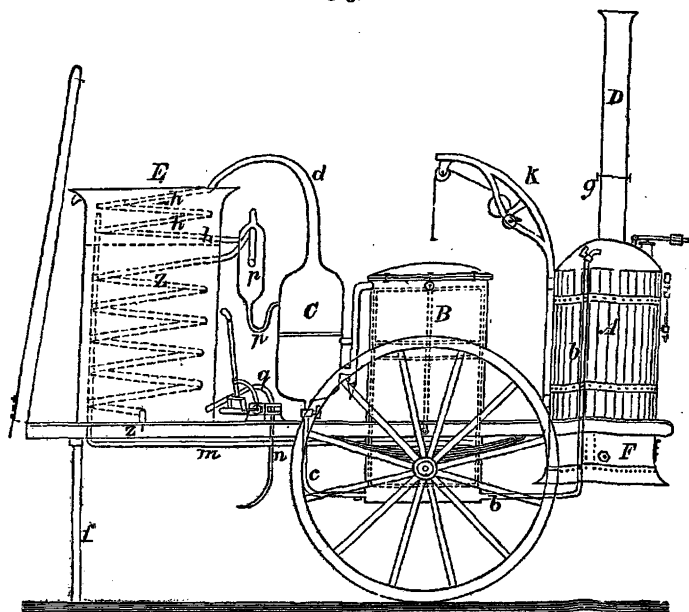
Figs. 2 and 3 show the construction of a still suitable for handling pomace. It is worked by steam, and is so arranged as to allow a continuous action. Two of the three boilers in Fig. 2 are constantly at work while the third is being emptied and filled. The apparatus (Fig. 2) consists of three boilers I, II, and III, each one holding about 560 litres. *A* is the tank for the once distilled spirit; *B, B, B* are the becken; *C*

Fig. 2.



is the cooler; *E* is the alcoholometer, which indicates the proof of the distillate; *D* is the receiver of the distillate; *F, F, F* are the filling doors of the boilers; *H* is the steam pipe; *J, J, J* are valves for turning off the steam; *K, K, K* are the discharge pipes; *L* the conduit pipe which lets off the dregs; *c, c, c* are testing cocks; *d* is the pipe for letting out the once distilled spirit; *M* is the pipe for supplying the cooler with cold water. The cocks *a, a, a* are for enabling any one of the boilers to be cut off from the others. *N* supplies the cold water to the becken.

Fig. 5



produced, including the time of filling and discharging, a product of from 15 to 17 litres of proof brandy per hour.

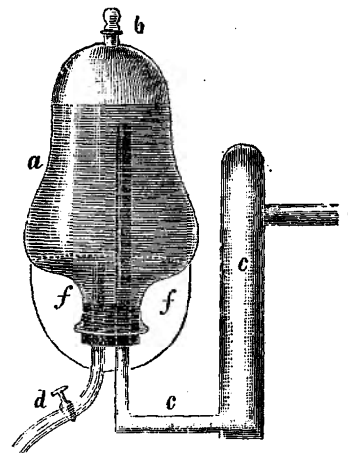
Steam is always preferable for distilling. If fire is used the product may be very inferior. With the stills described in Figs. 2, 3, 4, and 5, a more aromatic product will be obtained than if an ordinary still is used.

The peculiar aroma of wine is due to ænanthic ether. Pure alcohol boils at 78.3°C . (172°F .), while ænanthic ether does not boil until a temperature of 225° to 230°C . (437° to 446°F .), and so a great part of the ænanthic ether remains in the boiler in the usual process of distillation. With a second distillation of the pomace with very hot steam, most of it can be driven off, and if a still like Fig. 4 is used, this substance can be caught separately by using a small apparatus shown at *a*. Such an arrangement is shown in Fig. 6. It consists of the glass vessel *a*, having a small opening on the top, and which can be opened or closed at pleasure by the glass stopper *b*. At the bottom there is a larger opening, which is closed by a cork. Through the cork tubes are run, as shown, into the vessel *a*. Both tubes are of copper or brass, and the longer one is bent rectangularly as shown in *c c*. The joint at *e*, with the pipe in the cooler, must be snug and tight.

As soon as the distilled spirit begins to run, the stopper *b* is opened and the stop-cock *d* is closed. The vessel then begins to fill; as soon as it is filled, the opening *b* is closed with the stopper, and the cock *d* is opened. As long as the opening *b* is kept tight the vessel will not empty, and still the distilled spirit passes readily through; *ff* is a brass plate designed to give more strength to *a*.

The mode of operation is as follows: When nearly all the alcohol has

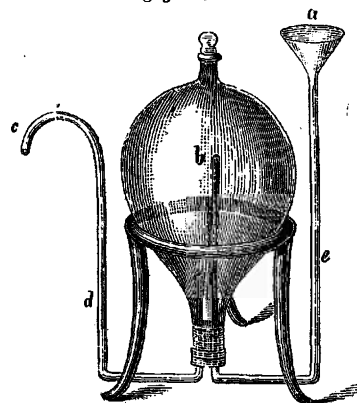
Fig. 6.



been distilled from the pomace, very hot steam is turned in. This drives the ænanthic ether from the pomace. It is condensed with the steam in the cooler, and thence it goes into the apparatus above described. The ænanthic ether has a lighter specific gravity than water, and floats on the surface in the glass vessel. As soon as no more ænanthic ether gathers on the surface the distillation is stopped. The ænanthic ether, if wanted in the brandy, can of course be added. It is soluble in alcohol. If it is added, the aroma of the brandy will be found to be greatly increased. It gives the well-known cognac flavor so much desired, if the brandy lays for some time.

Instead of the apparatus above described, the one shown in Fig. 7 can be employed.

Fig. 7.



This consists of the glass vessel *b* and the tubes *d* and *e*, both of glass. The principle is exactly the same as previously described. *b* rests on a tripod, and can be placed underneath the pipe running from the cooler, so as to let the distillate run into the funnel *a* of the pipe *e*. Thence it runs into *b*, where the ænanthic ether gathers in the upper part.

Brandy made from pomace in the ordinary way is the poorest of all spirits made from wine. It is thus of considerable advantage to get out the cenanthic ether in the above-described manner, as the quality will thereby be considerably increased. The loss of time and extra expense involved will be found more than repaid by the improved quality of the brandy.

PRODUCTION OF GAS AND FRANKFORT BLACK FROM POMACE.

After the spirit has been extracted from the pomace by distillation, the pomace can be used in the manufacture of gas. It can also be used for making a black color, Frankfort black, by carbonizing it in closed retorts.

H. W. Ilgen, of Gruenstadt (Palatinate), was the first one whose attention was drawn to the possibility of utilizing the gas evolved in the process of making Frankfort black. After several futile efforts he succeeded at last in finding a method by which he could produce from pomace previously used for making brandy a gas suitable for heating or illuminating, and then use the refuse for manufacturing Frankfort black. The apparatus for making gas from pomace is the same as that used in manufacturing coal or wood gas. Most of the pomace produced in France, after the spirit and tartar are extracted, is used in the production of gas. In Germany the first step in this direction was made at the gas factory at Gruenstadt, and the result was entirely satisfactory.

The bye-products arising in the production of gas from pomace are essentially the same as the bye-products where wood is used, namely, pyroligneous acid, ammoniacal liquors, an aggregate of hydrocarbons similar to coal tar, all of which can be used in making creosote, paraffin, etc. Before being used, the pomace must be absolutely free from alcohol, through having been distilled, or having the alcohol extracted in some other manner—by exposure to the air, for instance—and dry and free from mold. The manufacture of gas will be found particularly profitable wherever large quantities of pomace are obtainable.

The pomace is pressed as soon as it comes from the still, and, placed in wooden frames, is left to dry in the open air. Artificial heat for drying is not to be recommended, as the quality and quantity of the gas obtained subsequently may be injured thereby. The pomace usually loses one half its weight in drying.

Cast-iron retorts for making the gas are best. There is no fear whatever from sulphur; as there is in using coal. There is no need here to describe the process of gas making. Sufficient pomace is placed in each retort to fill it five or six tenths full. The pomace, say from 20 to 50 kilos (44 to 110 pounds) at a charge, is introduced into the retort on a shovel, which is at once withdrawn and the door quickly shut. A rapid and violent distillation of the pomace ensues. It may require four hours to complete the work, but as a rule the process is more rapid than with coal gas. The only special care is to see that the pomace is not too dry before going out. The retorts should not be heated more than to a dark red heat. Gas stoves will be found to work best in this connection, as being better regulated. When the pomace is withdrawn from the retorts it will be found to be of a deep blue-black color, especially if the proper precautions have been observed in making the gas. This black substance gives the Frankfort black of commerce a very fine

velvety black color. If the heat in making the gas has been higher than dark red, the residue will be dark grayish in color.

The distillation in the retorts may be considered as accomplished at the end of one or two hours. The retort is then discharged. As soon as it is opened, the gas remaining is lighted, so as to prevent a possible explosion while discharging. The residue must be withdrawn from the retorts just as fast as is possible so as to prevent burning as much as may be. The contents are pulled from the retort with a broad hook, and dumped into a sheet-iron can covered by a tight-fitting lid. This is to exclude the air while the residue is cooling. It is not objectionable to have the can partially full of clear, pure water to facilitate the cooling of the red-hot mass. The gas is subsequently cleaned and purified in the same way that wood gas is cleaned and purified. The gas lime thus obtained, and other bye-products, are utilized in the same way as bye-products from other gas houses. The experiments at Gruenstadt show that if the retorts are charged with 50 kilogrammes (110 pounds) of perfectly dry pomace, the product will be about $17\frac{1}{2}$ cubic metres (about 20 cubic yards) of gas of a much greater illuminating power than coal gas. This is if the retorts are heated to a white heat. With only a low, red heat, a charge of 50 kilogrammes (110 pounds) has produced 15.6 cubic metres of gas of the same illuminating power as coal gas.

Dried grape stones, on account of the large quantity of oil they contain, give fully double as much gas as the rest of the pomace, and of a much better illuminating power.

The Frankfort black, remaining after the gas has been extracted from the dry pomace, amounts to about 25 per cent of the original weight of the pomace.

It can also be stated here that lees can be used for making gas and Frankfort black after the brandy has been withdrawn from them by means of distillation.

To produce Frankfort black after the retort residues have cooled, the mode of procedure is as follows:

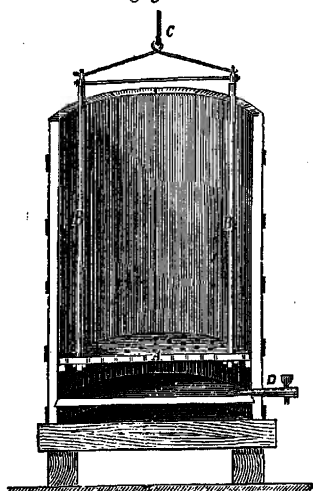
The residue is placed in wooden soaking tubs, and hot water is poured over it. All the soluble alkali is soaked out, the process being continued until the liquor above the residue is clear and shows no alkaline reaction. The soaking tubs are the same as those used in producing potash; that is, cylindrical, higher than broad, and the best are made of larch.

Fig. 8 shows such a tub. There is, as is seen, a double bottom, the upper one—A—perforated, and from 15 to 20 centimetres (5 to 7 inches) above the lower one. The perforated bottom is covered with coarse canvas. It is best to supply the perforated bottom with the attachment shown in the cut, to facilitate the removal of the Frankfort black when desired. This attachment is very simple, consisting of two wooden sticks B B, which are joined to the perforated bottom and connected at the top as shown, by means of a rope attached at c, which is connected with a windlass. The false bottom can then be lifted out of the tub at pleasure. The liquor, which gathers between the two bottoms, can be withdrawn at pleasure at D.

After the residue has been thoroughly soaked, it consists chiefly of very finely divided carbon and carbonate and phosphate of lime, and a very small percentage of silica.

The residue is ground while wet, as soon as taken from the soaking tubs, and can then be sold.

Fig. 8.



If it is desired to obtain perfectly pure Frankfort black—that is, to remove any lime that may remain—the residue must be mixed with cold concentrated muriatic acid, and then wash several times with pure water to remove the chlorides that form and the last of the free acid. The black can then be dried and sold. The remaining liquor neutralized is an excellent fertilizer.

Should no water have been in the sheet-iron box when the residues were removed from the retort, some ash will form around the residues in the box, no matter what care is taken to prevent it. These ashes should be separated from the residue before soaking. They can be utilized in making potash, etc., as they will produce from 27 to 30 per cent of potash.

Great cleanliness and care are essential to the production of Frankfort black.

Briefly stated, 1,000 kilos (2,200 pounds) of pomace from the distillery will make about 500 kilos (1,100 pounds) of dry pomace, and this quantity will produce 156 cubic metres of gas fully as good as the best coal gas, besides products of distillation in the retorts, and from 100 to 125 kilos (220 to 275 pounds) of pure Frankfort black.

If you will compare the production of gas from pomace with that from coal or wood, it will be found—

1. That pomace can be bought cheap in all wine-producing countries, especially after having passed through a pomace still.

2. No alterations have to be made in existing gas houses, so that pomace can be used while obtainable, and the factories can afterward return to the regular materials when pomace gives out. This is already done in many gas houses in France.

3. The product of gas from pomace is far greater than from ordinary coal, and the bye-products are more valuable, the Frankfort black being net profit.

4. If it is wished to give particular attention to the production of a very fine black, which pays best of all, no high temperature is used in

the process of making gas, and a saving is effected in this respect. Cast-iron retorts can be used, too, and they will last long, there being no destruction from sulphur. The retorts can also be easily cleaned. It can be easily seen that the process is profitable when pomace is cheap and available in considerable quantities.

Lees can also be used in making gas as well as distilled pomace. As early as 1862, R. Mueller, of Kitzingen, used lees for this purpose. They are equally as good as the best boghead coal. According to Schlamp, a hundred-weight of lees will give from 400 to 450 cubic feet of gas, which will give an illuminating power of ten to twelve candles, burning $4\frac{1}{2}$ cubic feet per hour. Six to seven hundred-weight of lees will give a hundred-weight of Frankfort black.

USE OF THE GRAPE STONES.

Grape stones can be worked up in many different profitable ways. Up to the present time but little effort has been made to realize their valuable constituents, and then only to extract the oil from them. This oil has been extracted for some time in Italy, and in some parts of Switzerland, France, and Germany. In some places they are used for feeding fowls.

The most valuable parts of the grape stones are the oil and the tannin. The percentage of oil contained ranges from 10 to 30 per cent; in a cold climate less; in the southern countries more. Moreover, the state of the weather during the growth and maturation of the grapes has great influence on the quantity. The stones of blue grapes also show more oil than those of the white varieties. The stones from grapes grown on young vines will also show more oil than on older vines.

The oil itself is, when fresh, of a bright golden or greenish-yellow color, afterward turning brown as it becomes older. It is somewhat thick, has a mild taste, almost without smell, and is far superior to nut oil. It dries in open air. The specific gravity at 15°C . (58°F .) is 0.9203. It begins to congeal at -15°C . (5°F .), and at -16°C . or -17°C . it turns brown and becomes of the consistency of butter. It burns very slowly, but when fresh it can be used as sweet oil or lamp oil. When old it makes an admirable oil for paints; it also makes a splendid soap when saponified with alkali.

The stones also contain from 5 to $7\frac{1}{2}$ per cent of tannin. This differs from the ordinary tannin of commerce, and is to be highly recommended for use in fine wines.

The stones are separated from the pomace by shaking and sifting. They are then washed with water and quickly dried, otherwise they will mold. The drying can be done in open air with frequent turning, or in a regular drying-room. They can then be kept for a long time.

To obtain the oil, the stones are ground fine and the oil pressed out. The oil can, however, be best extracted by the use of bi-sulphide of carbon or benzene. Both dissolve the oil very easily, and can be driven off equally easily by distilling, being used over and over again; nearly always the bi-sulphide is used at the present time, as much more oil is obtained by its use.

The bi-sulphide is poured over the ground stones in a specially prepared apparatus, then filtered and distilled. The whole operation before filtering should be done in a tightly closed receptacle, the bi-sulphide

being very volatile. The remaining powder can be used for the extraction of tannin. After the oil and tannin are extracted, the residue can be used in making Frankfort black.

A tannic extract of the grape stones can be used in wine instead of pure tannin. To make this one litre of 80° proof spirit is added to every kilogramme (2.2 pounds) of powdered grape stones. Let this digest for fourteen days, stirring frequently. Then filter. Add to the stones residue half as much water as was originally taken of spirit, and let this digest eight days more. Filter again, and the two filtrates are mixed for use. In this manner a tannic extract is obtained from the stones, which is of great value in cellar operations.

From 2 to 3 litres of this extract will be found sufficient to clear 1,000 litres of thick wine. It can be clarified with gelatine or isinglass, in case the tannic extract does not perform the work perfectly.

In France grape stones are often fed to horses and mules. H. Marès and T. Bauscarene ("Moniteur Scientifique," 1866, p. 188) published the results of experiments made, and recommended that grape stones be used instead of oats. The value of grape stones for feed arises from their content of protein substances—fat, as well as potash and phosphoric acid.

One thousand kilogrammes (2,200 pounds) of grape stones and oats contain:

	Ash.	Potash.	Lime.	Phosphoric Acid.
Oats.....	30 kilogrammes, in which are...	5.42 kilos.	1.12 kilos.	6.15 kilos.
Grape stones.....	28 kilogrammes, in which are...	8.07 kilos.	9.48 kilos.	6.72 kilos.

One hundred parts of stones contain:

	Fresh Stones.	Dried at 105 deg. C. (221 deg. F.)
Dry matter.....	61.00	-----
Protein.....	9.11	14.93
Fat.....	9.90	16.22

J. Nessler also recommends that the stones ground in the above-described processes, and with the tannin extracted, be used as a fertilizer. It will also be found that the grape stones are one of the best foods for fowls. All this shows the value of grape stones, and yet but little attention is paid to realizing on them.

CHAPTER III.

METHODS OF USING POMACE IN THE PRODUCTION OF WINE.

The smaller producers of wine should give particular attention to the following directions for turning their pomace to practical use. The different methods are separately mentioned in order that all may take advantage of them, according to the quantity of pomace which is

available for use. Everything has been omitted which calls for any expensive apparatus or great technical skill or knowledge, and methods such as can be employed by any wine producer are given; at the same time sufficient attention has been given to the utilization of everything of practical value, with the least possible cost.

Most wine producers do not have the time during the vintage to use the pomace, and it must be preserved without rotting until such time as it is wanted. Pomace ordinarily warms up and starts to ferment within two days after pressing, with the formation of acetic acid (vinegar). The pomace can be kept, however, in tubs or barrels covered over. The pomace must be packed tight into these receptacles. The nearer these are made air tight the better. If the pomace is to be first used for making brandy, a little spirit can be sprinkled in while packing, if the pomace is not at once placed in the still. Fresh grape leaves should be placed over the top of the pomace in the packages, and over this a thick covering of clay, which must be kept moist to prevent cracking. The receptacles should be kept in a cool place, and as a rule it is best to have them under ground. The main desideratum, in any case, is to prevent the air from circulating in the mass, which will certainly lead to the escape of the alcohol, and loss by mold and acetic fermentation.

Pomace, if kept air tight, will remain unchanged for a long time, and need not be worked up until winter time, or at any other time that suits the convenience of the wine maker. The contents of each receptacle will, of course, have to be worked up as soon as it is opened.

In many places pomace brandy is made and the remaining pomace afterward used for fertilizing the vineyard. The potash and phosphoric acid contained really represents all the fertilizing power of the pomace. In others it is used for making cream of tartar; in others for making Frankfort black, as above described.

Whenever the production of brandy is not desired, it is by all means to be recommended that the pomace be used for making after-wine (piquette), as in this way much of the alcohol remaining is turned to practical use, and the pomace remaining can go into fertilizers or used for making the black. Again, vinegar can be made from pomace after the after-wine is made.

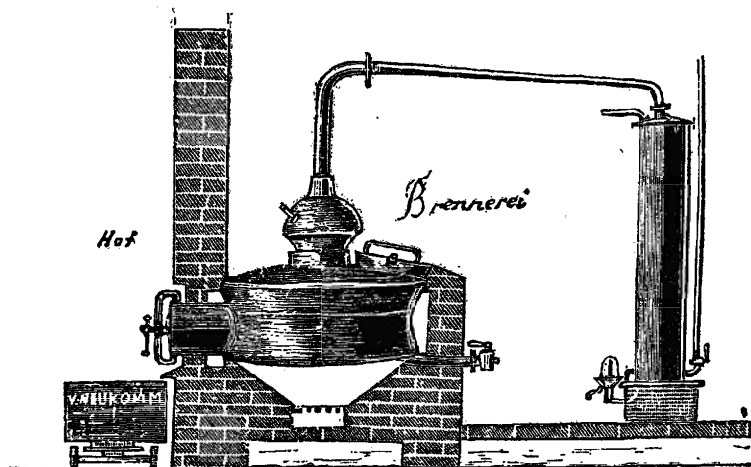
We will now take up these subjects one by one.

PRODUCTION OF POMACE BRANDY.

Whatever has been said in the previous chapter about making brandy from pomace on a large scale, applies equally well on a small scale. Whenever small producers make brandy they usually do it in an antiquated, unreasonable way, and they do not begin to get the full value of the residue. Nearly all of the old-fashioned stills consist of a kettle, helmet, and cooler, arranged in the crudest fashion. The devices for filling and discharging are poor, taking up much time in manipulation, and the product is almost invariably poor and low in proof. By using such a still the operation is seldom profitable, and the consumption of fuel and time is a most serious matter. The same conditions requisite in distilling on a large scale apply with equal force here; *i. e.*, quality of product, high proof, and saving of fuel and time.

I will only mention two stills that are adapted for the use of the small producer. Fig. 9 shows a practical still—practical, because it has

Fig. 9



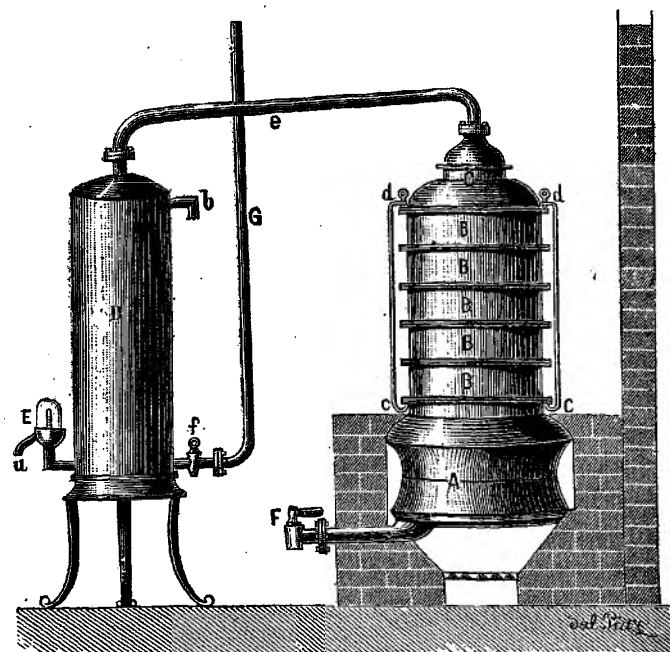
a large opening on the side for discharging the spent pomace. Next to the helmet is a large opening for charging the still, and at the bottom of the still is a pipe, through which burnt sediment, lees, etc., can be drawn off. The emptying and filling, therefore, does not require much time. The water in the cooler is supplied by suitable pipes, and kept running in at the bottom and out at the top. Such a still has a capacity of 560 litres, and a charge can be run through in from two and one half to three hours.

As has already been mentioned in reference to large stills, the use of steam is to be recommended. Direct firing is apt to cause burning of the pomace, and consequent bad taste and smell of the product. As it may not pay small producers to use steam, the still of Căraideau is to be recommended. No burning of the pomace can occur in this still, though direct firing is employed.

Fig. 10 shows such a still. It is a column still, consisting of the boiler *A*, over which is a cylindrical column *B, B, B, B, B*, each portion being separate and having a sieve-like bottom. In a small apparatus the still is about one metre (thirty-nine inches) high, and the cylindrical compartments fit exactly one within another. On top is the helmet *C*, and the compartments are kept together by the braces *d c*. The steam and alcohol go through the pipe *e* to the cooler *D*, where they are condensed, and run off at *a*, after having passed the alcoholometer at *E*. The supply of cold water which passes through the pipe *G* into the cooler is regulated by the faucet *f*, and the heated water runs out at *c*. The lees, etc., are removed from *A* at *F*.

To fill the still, the first compartment of the column above the boiler is filled with pomace. Then the second, and so on. The remaining liquor, if any there be, is poured on top of the pomace in the top compartment. The helmet is adjusted, and the still is braced together by the rods *d c, d c*. As soon as the water in the boiler begins to evaporate, the vapors pass upward through the sieve-like bottoms of the several compartments, and the alcohol is soon carried off. It is best to have

Fig. 10.



an extra column of compartments for each boiler, if the laws will permit, so that while the alcohol is being boiled out of one set, the others can be discharged and refilled.

This distilling apparatus not only allows the distiller to use direct firing on a small scale, with the advantages accruing from the use of steam, but the distillate can be obtained of high proof from the start.

With the two attachments for gaining the ænanthic ether (described in Figs. 6 and 7), the producer is enabled to save this product with his small apparatus. The attachments are placed on the still as soon as all the alcohol is distilled, in the manner previously described. As soon as all the ænanthic ether is obtained, which can be told by the stoppage of the formation of new drops of it in the attachment, the process is over. The ænanthic ether can be used for improving the quality of the brandy in the manner previously described.

If steam is used in distilling pomace it is not necessary to add any water to it, but if direct firing is employed water must be added to prevent burning and to facilitate the operation.

An improvement can be made in the brandy by pouring over the pomace, before the distillation, a concentrated solution of grape sugar and water—or fermented solution—as the quality of the brandy and the quantity of the distillate can be greatly increased thereby.

The best method of preparing this is as follows: For every 100 kilos (220 pounds) of fresh pomace from the press, take twelve crushed quinces of medium size; add the quinces to a mixture of 50 kilos (110 pounds) of grape sugar dissolved in 3 hectolitres (about 80 gallons) of water, and

pour the mixture over the above quantity of pomace. Let this mash ferment for eight weeks in closed fermenting vats, or in closed barrels, arranged as described in a future chapter. The quinces will be found to give a most delicate aroma and flavor to the mash.

After the mash has fermented out it is distilled. The alcoholic product will be found to have increased very materially, and the brandy will be very aromatic, and after some time in warehouse will be found to resemble cognac very strongly. It can even be sold as such. This method of distilling pomace and grape sugar will be found even more profitable than that of using pomace direct.

After distillation it will be found that many valuable potash and lime salts remain in the liquor and pomace, the most valuable of which are the tartrates. When the hot solution as it comes from the pomace still cools off, the so-called *cristaux de marc* crystallize out. In many places in France and Italy this process is carried on, but it is not nearly as extensively done in the Palatinate. A very common method is to dry out the pomace, and when the tartar has crystallized, sift it out. The coarse crystals are afterward refined.

It is still more advantageous to press the pomace as it comes from the still (and while warm), and evaporate the liquor which comes from it until a scum forms on the surface. Then put the liquor in wooden tubs, and the tartar crystallizes out on the sides and in strings. Fresh liquor from the still is added to the remaining brine, after the crystals have been removed, and the process is thus continued as long as the still runs. The process is very simple, and is profitable to all who work at it. The crystals are dried and sold.

Valuable potash salts may be obtained afterward by neutralizing the remaining liquor with carbonate of lime, and stirring and heating. Chloride of calcium is then added, and the potash salts are crystallized out.

The pomace, after the extraction of the brandy, the ænanthic ether, and the tartar, can still be used for fuel or manure, or for making the Frankfort black.

AFTER-WINE (PIQUETTE).

If the producer does not wish to make pomace brandy, or any of the bye-products mentioned in connection therewith, the best plan is to make after-wine (piquette) from his pomace.

As already stated, no matter how great the pressure applied to pomace in the wine press, alcohol or sugar, as the case may be, will remain in the mass. This is especially true when the seasons are favorable to the development of a high saccharine content in the grapes.

The juice remaining can be fully extracted by means of water, as well as certain tartrates and other potash salts.

In making after-wine according to the Petiot system, the best results of any are obtained. Unfortunately, this system has not been used to any extent outside of France, and this is one of the reasons why the French produce such a cheap, ordinary wine of a uniform character. Considering the unreasonable opposition which invariably meets any new meritorious proposition, the Petiot system will always require time to be introduced, and particularly in Germany and Austria. It is likely, however, that this rational system of making after-wine will be intro-

duced in most wine-producing countries, for almost everywhere pomace is used in some manner for making a cheap wine for family use.

Even in the days of the old Romans a beverage was made by pouring water on pomace. It was called *lara*, reminding one of the term "Lauer," or "Leier," by which it is now known in some countries. In Austria it is called "Hansel" and "Glauer," and in Italy an after-wine is made which is called *vino piccolo*. There, however, the pomace is not pressed, but the juice is merely allowed to drain out, after which an equal quantity of water is poured on the pomace. This method of making after-wine might be called an imperfect Petiot system.

The usual method of making after-wine is to add water to thoroughly pressed pomace, and to let the mass stand for several hours, after which the pomace is pressed and the wine used for immediate consumption. This wine will not keep, on account of the small percentage of alcohol contained, and it always tastes of the pomace.

A more rational method will enable the producer to make a wine that in bad years may even approach the first pressing in quality, and may even be blended with it. In good years, when the grapes get thoroughly ripe before picking, the after-wine may be made of very good quality. Several methods are proposed. Either some water, in which grape sugar or cane sugar is dissolved to the limit originally contained in the must, is poured on the pomace, and fermentation is allowed to proceed; or as much alcohol is added to the water as you desire in the wine, and the pomace is allowed to digest in this solution of alcohol and water.

If it is wished to let the pomace ferment with sugar and water, cane sugar will be found better than grape sugar, as the grape sugar of commerce generally contains only about 60 to 75 per cent of sugar that can be fermented, the balance being unfermentable substances and water. On the other hand, ordinary cane sugar contains at the utmost not to exceed 5 per cent of water and other substances. Although cane sugar is more expensive, less will be needed to secure the desired quantity of alcohol in fermentation. Moreover, five parts of cane sugar will give as much alcohol as six parts of pure grape sugar by fermentation.

Cane sugar is thus but little more expensive than grape sugar, and its use is to be advised further, because no foreign substances are introduced into the wine, and time is saved by the greater readiness with which it dissolves.

If alcohol is added instead of sugar—and this is by far the most expeditious and satisfactory way—use only the neutral spirit of wine. It can be produced easily in any wine-growing country, and can be tested more easily in regard to strength and cleanliness than the sugar. The process is also simpler and cleaner.

To avoid as far as possible the taste of the pomace in the after-wine, it must be used just as soon as it comes from the wine press, and they must not be allowed to ferment one instant. It is advisable not to press the first time too hard, as all the valuable ingredients are extracted in the later process anyway. If it is absolutely impossible to work up the pomace at once, it is urged that it be sprinkled with a little spirits of wine before use.

The process of making after-wine is very simple, and no apparatus other than that ordinarily found in wineries is needed. Should the producer have large fermenting vats, they will be found very convenient, but an ordinary barrel will do. The vat or barrel should be mounted a

little above the level so as to permit of easy access below, and the bottom of the vat should have a bung-hole well stoppered and covered from above with grape stems, or leaves, to prevent the pomace running out with the wine when it is drawn off.

The vat is filled about two thirds with fresh pomace, and over it is poured the sugar and water until the vat is nearly full. A cover is then placed over the vat with a fermenting bung. This precaution makes acetic fermentation impossible.

During the fermentation the temperature should be maintained at from 12° to 14° Reaumur (58° to 62° F.).

The pomace and sugar and water may ferment out in three or five days, but if the temperature above noted is maintained it may take from six to eight days. If water and alcohol are used instead of water and sugar, the mass should be allowed to digest about four days, keeping covered as before, and with a fermenting bung.

As a rule it is not desired to have the alcoholic strength of the after-wine very high, and an 18 or 20 per cent solution of sugar and water will be found to meet all requirements. For preparing an 18 per cent solution, about 30 kilos (66 pounds) of grape sugar will be needed to every 100 litres of water. If cane sugar is used, 20 kilos (44 pounds) will be found sufficient.

If it is wished to make a lighter wine a 16 per cent solution will do. To prepare this, about 25 kilos (55 pounds) of pure grape sugar, or 17 kilos (38 pounds) of cane sugar, to 100 litres of water should be taken. Grape sugar varies considerably in its content of water, and when this sort of sugar is used, a saccharometer had best be used as a test, but the result even then can be said to be only approximate, as the commercial grape sugar always contains foreign substances.

The content of tartaric acid can also be calculated, so that you can add any that may be deemed necessary.

After having gone through the process as above described, and tapped off the wine at the bottom of the vat, the pomace remaining is by no means exhausted. Water and sugar, or alcohol and water, can be added three or four times more.

The after-wine obtained in this way on the second or third time is not inferior to the first, but has even more flavor and aroma. However, the best way of making after-wine is as follows:

Place 4 hectolitres (105 gallons) of pomace in a vat, and add 880 litres of water, mixed with 120 litres of 80° spirits of wine, 10 kilos (22 pounds) of cane sugar, and 4 kilos (9 pounds) of tartaric acid. Let the mixture stand for five days at a temperature of from 15° to 18° Reaumur and then tap off the liquor. By adding sugar a fermentation is set up, which facilitates the extraction of the flavoring matter from the pomace. With this method the pomace can be used several times over. If blue grapes are used, of course the wine should remain on the pomace somewhat longer in order to extract all the coloring matter possible. After taking as many runs of wine from one lot of pomace as is desired, the vat is emptied and the pomace put through the press. The pomace can then still be used for making Frankfort black, or for fuel or fertilizer.

The quality of after-wines produced by these different methods is but little different from natural wine. They contain, of course, but little acid, and if perfectly ripe grapes have been used the deficiency is very

marked, and had best be supplied by the addition of some acid to the proper standard (5 per 1,000).

If fermented too long the after-wines are apt to contain too much acid. If too much tannin is present it can be removed with gelatine.

The cellar management of after-wine does not differ from that of other wines. Such wines are a cheap and healthy beverage for the vineyard hands. Whenever made from the pomace of the best grapes they can often be blended to advantage with poor wines, greatly adding to their quality. I would recommend the production of after-wine wherever possible as one of the most rational methods of disposing of the pomace.

PRODUCTION OF VINEGAR FROM POMACE.

About two centuries ago the well-known Dutch philosopher, Hermann Boerhaav, introduced a method for making vinegar from pomace. The method consists in placing grape stems and pomace in two upright tanks, one filled completely full and the other half full. Wine is added sufficiently to enable the pomace to be poured, and the contents are then constantly poured from one tank to the other. This brings all the material into contact with the air, and acetic fermentation sets up very quickly.

This system of Boerhaav has been modified by the eminent Schuetzenbach, who invented specially constructed vinegar tanks, and who used diluted spirits and beechwood shavings instead of wine and pomace. This is the so-called rapid method of making vinegar, and the great bulk of the vinegar of commerce is made in this manner. It is profitable, because the product considerably resembles wine vinegar, and the materials are cheaper.

But wine vinegar commands a high price, and if you are going to manufacture it some modification of the Schuetzenbach tanks is advisable. I would recommend producers who have no sale for their light white wines to experiment with vinegar making and the vinegar market. I am not speaking of those wines which, through carelessness in handling, are already rancid and fit for little else.

Figs. 11 and 12 show the most judicious arrangement of the vinegar tanks for handling pomace. They resemble very much the tanks used in the vinegar factories, and are based on the same principle; *i. e.*, they are so devised as to bring the material as much as possible into contact with the air.

A, A are two tubs of oak. In order to bring plenty of air into the tub and keep it there, four perforated bottoms, *a, a, a, a*, are placed in each tub. The bottom of the top tub, *B*, is pierced with two holes, into which the strong glass tubes, *F, F*, are fitted. *D* is the discharge pipe fitted with a faucet. Around each tub are five rows of holes *b, b, b*, etc., each from two to three centimetres in diameter, and bored obliquely toward the center of the tubs, preventing any escape of fluid through them, and at the same time admitting air. *B* is hooped with wooden hoops.

Before using the tubs the pomace is allowed to ferment in open air. Then the lower false bottom is put in place, filling up to the level of the second false bottom. Then the second false bottom is put in, and so on. The top, or filling tub, is then put on top, and the cover *C*. This done, the percolating liquor (either light wine or largely diluted alcohol)

Fig. 11.

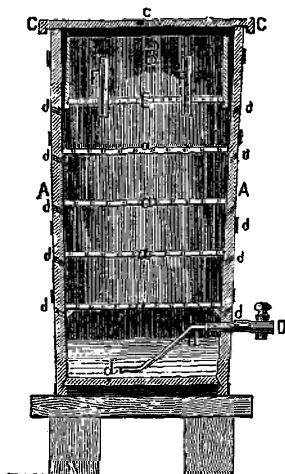
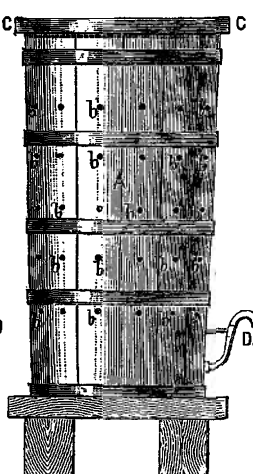


Fig. 12.



is allowed to pass in at *c*. About a 6 per cent alcoholic solution will be found strong enough. Considerable heat is produced on adding this liquor, and any evaporation passes through the tubes *F, F*.

The temperature may reach as high as 28° Reaumer, and even more, but it is preferable not to let it rise any higher than can be avoided, so as to preclude the loss of alcohol and acetic acid. On the other hand, if the temperature is too low, the alcohol may pass clear through the tub without change. The operation should be conducted in a temperature of from 15° to 20° Reaumer.

As will be seen in Fig. 11, the liquor aggregates in the space between the lowest false bottom and the true bottom. The tube *d d* is bent so as to get the lowest portion of the vinegar in the tub. Vinegar has a higher specific gravity than the alcoholic solution, and so it sinks more to the bottom of the tub.

In Fig. 12 the discharge pipe *D* is shown as a bent glass tube.

The acetification of the alcoholic liquor is not fully accomplished by running it once through the tub, and, according to the alcoholic degree, it may have to be run through several times. It is best to use from two to four such tubs, arranged so that after the liquor passes through one, it runs to the next. If the original liquor contains but 3 to 4 per cent of alcohol, it will be completely turned to vinegar by running through two tubs.

These vinegar tubs are usually from 1½ to 3 metres (5 to 10 feet) in height, and of corresponding diameter.

If wine or an alcoholic solution of 6 to 8 per cent is used the process may be completed in forty-eight hours.

A set of vinegar tubs once charged can be kept running for several months before it is necessary to put in new pomace. But the tubs must never be allowed to stand full of pomace without the process of vinegar making going on constantly.

In enumerating the advantages of making vinegar, it will be found that by using dilute spirit and tubs charged with pomace, a vinegar

will be produced equal to the best wine vinegar in flavor; that only a very dilute spirit or wine need be used; and that even then a strong vinegar will be produced. Finally, after the pomace is taken from the tubs, it is still available for fertilizers, etc.

MANUFACTURE OF ŒNOCYANIN.

Pomace from blue grapes always contains a large quantity of coloring matter, which can be extracted and used for coloring red wines that are too pale. Œnocyannin is a component part of the skins of blue grapes, and in its natural state is a pure blue, turning red on the addition of acids. It is not soluble in water, alcohol, or ether, but dissolves in alcohol mixed with tartaric acid.

The color of the resultant liquor when dissolved varies according to the quantity of free acid present, being of many shades, such as blue, violet blue, or red in its many varieties. By adding alkali until the acid is neutralized, the solution will turn blue, but an excess of alkali will ruin the color.

It is to be recommended that the coloring matter be extracted whenever possible from the grape skins, as by rights this is the only color that should be used with red wines showing naturally a poor color. In making wines by the system of Petiot, it should be used with the alcohol and water.

The method of extracting the coloring from the skins is by means of alcohol, water, and some tartaric acid. By using the following method, each vintner will be able to get the coloring for his own wines from his own pomace:

The stems are separated from the pomace by means of sifting, and the stones are separated, as far as possible, in the same manner, or by soaking the pomace in plenty of water. The skins are then pounded with a wooden pestle, in small quantities at a time, so as to tear up the coloring cells in the skins. The thoroughly macerated skins are put in a tub with dilute alcohol and tartaric acid. About 12 litres of clean spirits, afterwards diluted, to every 10 kilogrammes (22 pounds) of pomace and 175 grammes of acid, will be found about the right proportion.

The mixture is allowed to digest for three or four days, and then put through a strong crushing machine. To get still more coloring matter, the residue is again treated with a little spirit (about one half of what was used the first time), and again crushed. The coloring matter thus obtained is kept in glass, in a cool, dry place. It imparts a deep color to pale-red wines, and not only does this, but adds to their flavor. It greatly improves the product in bad years.

To obtain a more highly concentrated solution of Œnocyannin, a separate arrangement for distilling will be needed, and distilling should always be resorted to in the larger factories. The process is begun as described above, using instead 90 per cent spirit and 5 per cent tartaric acid. This process calls for the use of well-tinned copper boilers, and arranged to allow the evaporating alcohol to be caught and saved.

After letting the mash of skins, alcohol, and acid digest for five or six hours, it should be crushed in a powerful, but small press, and re-treated. The solution thus obtained is placed in a still and reduced to one tenth of the original volume, the alcohol being caught in a suitable cooler. To

every ten parts of the condensed solution of oenocyanin should be added four parts of high-proof spirit. From 1 to 2 per cent of this solution thus obtained is sufficient to color any wine a dark red. Skins employed in making oenocyanin must be used in a fresh state, and as soon as they come from the press. Should this be impossible, they may be kept a short time by first removing the stems and stones and then packing in barrels, with a little spirit added.

MAKING VERDIGRIS.

The production of the common, or so-called blue French verdigris, by the use of pomace and metallic copper, consists in piling up sheets of copper with pomace which has undergone acetic fermentation, in barrels or earthen vessels. The crust of verdigris which forms on the copper is scraped off from time to time. This method is used principally in the wine-growing districts of southern France. The production does not, however, form a separate industry, and is generally counted by the wine producers as a side business, especially in the vicinity of Montpellier and Grenoble. In that portion of France nearly every wine maker has his verdigris cellar, and nearly all the operations are done by women. In other countries of Europe the production in this manner is inconsiderable.

There is another method, though mostly applied in Germany and England, which will be mentioned at this time, but which does not properly belong within the scope of this work, as it does not deal with the utilization of wine residues. In this method copper plates are piled on flannel dipped in vinegar. The flannel is wet every three days. After fourteen days the copper plates are removed from the flannel, and are occasionally wet with water. After the expiration of five or six weeks the plates are scraped off. This method gives a very clean green verdigris.

In the French method the pomace must not be crushed too much, and must not have been used in making after-wine. The pomace, first of all, is placed in barrels, about 45 centimetres high and 30 or 35 centimetres broad. The acetic fermentation is completed in these barrels, and the temperature may rise as high as 35° to 40° Reaumer (110° to 122° F.). Should the acetification be too slow, it may be hastened by stirring the pomace, and heating the room in which the fermentation is carried on. Too rapid fermentation is to be avoided, however, as involving the loss of much alcohol and acid.

To ascertain when the pomace contains sufficient acid for the process to begin, a plate of copper is placed in the mass. This should be covered within twenty-four hours with an even, green coat. If it "blisters," that is, if it shows green drops on the lower side, the temperature of the pomace is too high, and twenty-four hours should elapse before another test is made.

The plates used in France in the manufacture of verdigris are from 11 to 16 centimetres long, 8 centimetres broad, and 1 millimetre thick. The remnants of ship sheathings are largely used in the process, as cheap copper is an absolute essential to the profitable operation of the process. If ship sheathing remnants are used, they should be hammered somewhat thinner than they are usually made, and the coating of copper oxide that always forms on copper is thereby removed.

They should also be rubbed off with linen dipped in vinegar, and dried before use; otherwise they are apt to turn black. Sometimes, in southern France, burned clay pots about 45 centimetres high and 35 centimetres in diameter are used in the process, instead of wooden barrels.

The copper plates are first heated to a temperature of 30° to 40° Reaumer before an open fire, and are then piled in the barrels or pots in layers, alternating with pomace. At least 3 centimetres of pomace should intervene between each lot of plates. In this way from one hundred and twenty to one hundred and sixty of these plates can be placed in each pot, weighing altogether from 15 to 20 kilogrammes (33 to 44 pounds). The pots are covered with straw, admitting the air freely, and are permitted to stand without handling from two to three weeks in a cellar having a temperature of from 10° to 20° Reaumer (53° to 74° F.).

As soon as the pomace appears white on top, the process of the formation of verdigris is completed, and the copper plates then show the cover of silky, green, crystalline coating desired. The copper plates are then removed, cleaned, dipped in water diluted with vinegar, and are placed leaning against one another on boards in the cellar.

This process of dipping and drying is repeated six or eight times a week for several weeks. In this way the crystalline covering is gradually turned into the light blue, and the verdigris crust is formed, which is from 3 to 4 millimetres thick.

This crust is scraped off with copper knives and kneaded with water in a wooden trough. The kneaded mass is put in leather bags about 30 centimetres long and 25 centimetres in diameter, and pressed in square frames. They are then permitted to dry in the air and sun, and the mass will lose from 40 to 50 per cent in weight.

The copper plates can be used several times until they are very thin. In this way with every operation the product of verdigris will be about 12 to 15 kilogrammes (26 to 33 pounds) from every 100 kilogrammes (220 pounds) of copper plates. According to St. Pierre, the product from 3 hectolitres (80 gallons) of moist pomace is about 41 kilogrammes (90 pounds) of moist verdigris, which is equal to 20 kilogrammes (44 pounds) of the well-dried article. The blue verdigris produced there often contains grape stones. The pomace, after use in this process, is still available for fuel.

POMACE AS FODDER.

Nearly everywhere in Europe pomace is used for fodder. Cattle, sheep, and hogs eat it readily. In many places the pomace is fed just as it comes from the wine press. In many localities the pomace is preserved by salt, using half a kilogramme (1.1 pounds) of salt to every hectolitre (26.4 gallons) of pomace, and adding water until it stands over the level of the pomace. It is advisable to sift or wash out the grape stones before preserving the pomace, as they are rather difficult for cattle to digest.

Dried pomace can also be used for fuel, in which case the cheese, as it comes from the wine press, is cut into thin slices and dried quickly in the air. In feeding, these dried cakes should be cut into small pieces, mixed with chopped hay or straw, and made into a boiled or steamed mash. This makes the pomace more digestible.

The stones are excellent food for poultry.

Even the pomace after coming from the pomace still makes good food, but is not as nourishing as fresh pomace. Experiments made in France have shown that 160 kilogrammes of fresh, unfermented pomace, or 150 kilogrammes of fermented pomace, or 300 kilogrammes of distilled pomace, have each the nourishing value of 100 kilogrammes of the best sweet hay.

The relative value of pomace for feed can also be seen by the following tables:

On an average, 1,000 kilogrammes of the following:

	Ash.	Potash.	Lime.	Phosphoric Acid.
Oats.....	30 kilogrammes, in which are...	5.42 kilos.	1.12 kilos.	6.15 kilos.
Grape stones.....	28 kilogrammes, in which are...	8.07 kilos.	9.48 kilos.	6.72 kilos.
Grape skins.....	40 kilogrammes, in which are...	17.70 kilos.	8.40 kilos.	7.24 kilos.
Pomace.....	27 kilogrammes, in which are...	9.96 kilos.	2.88 kilos.	2.88 kilos.

In one hundred parts of the components of pomace, there are contained (dried at 105° C.):

	Skins and Stems.		Stones.	
	Fresh.	Dried.	Fresh.	Dried.
Dry substance.....	50.00	100.00	61.00	100.00
Proteids.....	7.31	14.52	9.11	14.93
Fats.....	2.99	5.98	9.90	16.22

This shows that there is about 8 per cent of proteids and 6.4 per cent of fatty substances in one hundred parts of fresh pomace.

Salting makes the pomace more digestible for animals, and it has been shown that 2 to 3 kilogrammes (4.4 to 6.6 pounds) of pomace, mixed with a corresponding quantity of straw, is sufficient for one feeding of an animal.

Although pomace makes fair food, almost any other way of disposing of it is to be commended as more profitable, and only in a few instances and under peculiar circumstances is such a manner of using it up to be advised.

POMACE AS FUEL.

After having used the pomace in making after-wine, or brandy, or vinegar, as the case may be, the remaining substance can be used as fuel. In countries in which the fuel supply is short and prices are high, as, for instance, on the Rhine, this is what is generally done with the spent pomace. The ashes can still be used for fertilizing, containing much potash and most of the valuable materials for manure.

The best means of attaining this end is to shape the pomace in circular cakes in molds, or like bricks. The best size for the bricks is 25 centimetres long, 10 centimetres broad, and 8 centimetres thick, which is a most convenient size for handling. The best plan is to let the pomace lay some time after it leaves the press, until it is a bit black and soft. It can then be pressed into the wooden molds provided for it, using a

very simple press; and the cakes are piled in a dry and airy place protected from rain.

The thoroughly dried cakes produce a lasting and hot fire. They can be used almost anywhere that heat is desired—in ordinary stoves, in heating boilers, and under a still which calls for a steady and lasting heat. Wine producers ought to pay more attention to this method of securing fuel. Expenses are reduced all around by doing so. Potash can be removed from the ashes of pomace as described under Fig. 8. If operations are conducted on a large scale many of these tanks will be needed, but in a small plant two will be found amply sufficient. The tanks are filled with sifted ashes, and enough water is added to one to reach about 4 centimetres above the top of the ashes. The leaching process continues for about twelve hours, when the lye water is drawn off. It is then added to the ashes in the next tank, and the leaching process is repeated until the water contains from 20 to 25 per cent of saline matter. The lye can then be boiled out in flat iron pans, stirring constantly. The potash soon crystallizes out as a brown substance (colored by organic matter), containing from 6 to 10 per cent of water. This is the raw potash of commerce. If thought desirable it can be calcined, which drives off the water and destroys the organic matter which colors it. The stoves used for calcining are built like an oven, with a fire front and back playing over the potash, and the operation takes only a few hours. Wood must be used in this process of calcining, and the heat must be increased very slowly. Melting of the potash must by all means be avoided, as to melt it greatly injures its value.

Two thousand parts of fresh pomace will produce about 1,000 parts of fuel. In burning this you will get from 125 to 130 parts of ash, from which from 22 to 27 parts of raw potash can be obtained, which in turn loses 8 to 10 per cent of its weight by calcining. After leaching out the potash the substance remaining consists of carbonate of lime, phosphate of lime, magnesia, siliceous acid, etc., and is still valuable for manure, from the phosphoric acid contained in it. It must be noted that if this process of extracting potash is to be made profitable, cheap fuel for boiling and calcining must be available. Bricks of pomace can be partially used in the calcining, and altogether in the boiling.

FERTILIZING VALUE OF POMACE.

If the wine maker has no other use for pomace he had best use it as manure. In this manner many ingredients of the soil that are indispensable are returned to it after being extracted by vineyard cultivation. It is not of much consequence whether the pomace is used in the many ways enumerated above before being returned to the earth or not. In any event the material still contains all of those mineral ingredients, *i. e.*, phosphoric acid, etc., which go to constitute a valuable fertilizer. As far as the fertilizing value is concerned, there is absolutely no difference between the distilled and the undistilled pomace. However, making cream of tartar from the pomace diminishes the value of the material as a manure, as some of the potash is thereby lost.

Wherever the vineyards are situated on thick clay it is by all means advisable to loosen up the soil with pomace which has been through the cream of tartar works, or otherwise. For such vineyards it is advisable to spread the pomace over the soil to a depth of 3 to 5 centimetres, and

plow or cultivate it under. In this way the surface is loosened up for some time, and is more accessible to atmospheric influences. After a short time the beneficial effect of such amelioration of the soil becomes very marked. The leaves look healthier and greener than before, and production is eventually stimulated. The decaying organic matter stimulates growth of vines and improves meadows as a matter of course.

It is a very good plan to mix pomace with ordinary stable manure and use the mixture in the ordinary manner. It is also advisable to mix the ashes remaining after burning the pomace bricks with stable manure, as the most convenient method of applying it to the soil. To use the ashes alone on meadows, they should be kept in a dry place until fall or spring, when they are sprinkled on the turf.

The leached ashes from which the potash has been taken are a very good fertilizer for clover.

CHAPTER IV.

UTILIZATION OF LEES.

Lees is the brownish or yellowish substance which separates from wine during the alcoholic fermentation, or after as a foam or sediment, and which consists not only of different solids, but of the fermenting organisms which are produced by, or give use to, alcoholic fermentation. Lees appears during the first fermentation of grape juice, as well as later on at the second fermentation, and the dregs, when settled, carry from 5 to 8 per cent of the fermented wine. Next to the cream of tartar it is among the most valuable bye-products in wine making. To go into the particulars of the composition of lees one must refer at the same time to the process of fermentation.

Everybody knows that the must of grapes, if left to itself, undergoes radical changes. Previously clear, it becomes muddy, and carbonic acid rises in bubbles from the fermenting mass, causing the foaming. The temperature of the fluid rises, and at the same time the peculiar vinous smell appears, and the sweetish taste of the must disappears and is replaced by the characteristic vinous taste.

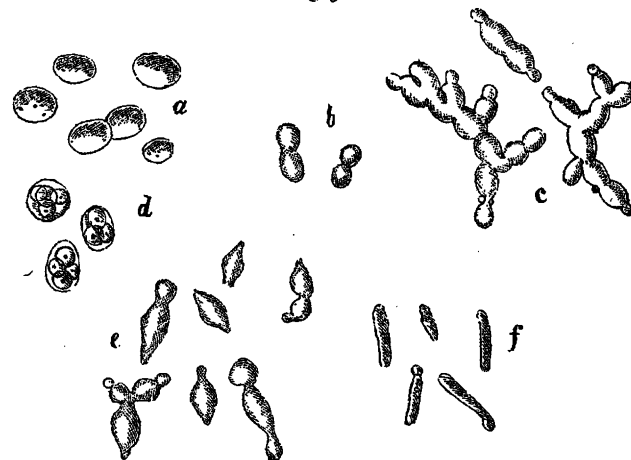
The physical changes which take place in the must are accompanied by a great change in the chemical composition. Besides the formation of alcohol and carbonic acid gas, and the consequent disappearance of the sugar, several stable substances are separated from the fluid and settle to the bottom with dead fermentation germs, etc. Moreover, other changes occur which are of little moment to us at this place. The cause of all the changes is the fermentation germs, which are active at a temperature above 5° C.

It has been held for forty years that the ferments in the dregs were the original cause of fermentation, and even until now there is a vast difference of opinion about them. These fungi belong to the lowest vegetable classes; they are very small, .006 to .01 of a millimetre in diameter, and are, of course, visible only under the best microscopes. The germs from which they spring are floating in the air, and when they get into a fluid containing fermentable sugar or protein they develop very rapidly. According to the temperature of the fluid, which may range from

5° to 15° C., the ferments may sink to the bottom; or above 15° C. they may float upon the top. Under the former circumstances under fermentation sets in, and under the latter upper fermentation begins.

Many different ferments are known, but only those of the lees are important.

Fig. 13



THE DIFFERENT FUNGI.

a to d. *Saccharomyces ellipsoideus*.

a shows the dregs from new wine, magnified 600 times.

b shows the germinating fungi, during the under fermentation, magnified 400 times.

c shows the germinating fungi during the upper fermentation.

d those with ripe spores.

e shows the *saccharomyces apiculatus*, magnified 600 times.

f *Saccharomyces restii*.

f shows the red wine dregs, magnified 350 times.

The cells have thin, colorless, but plainly visible walls, and contain a colorless, slimy substance in which little bodies can be plainly seen. The fungi all propagate rapidly.

In Fig. 13 will be found the different forms of the *Saccharomyces ellipsoideus*, the most important of all. Pasteur calls it the "*ferment alcoolique ordinaire du vin*." Considering the low temperature at which under fermentation takes place, the vegetable activity of this fungus is not great, but in upper fermentation it takes a leading part. The cell processes are rapidly formed, as shown in *e*. Any one of them in a fermentable liquid will form numerous fungoid growths, and this continues as long as there is sugar left to operate upon. When the fermentation is over, then, and not until then, do the fungoid growths settle down.

Besides fungoids, the lees contain albumen, a considerable quantity of tartrates and tartaric acid crystals, and other vinous acid salts.

These compounds represent the valuable constituents of lees. The lime and potash salts of tartaric acid are less soluble in alcoholic solutions than in water containing sugar only. Minute crystals are consequently to be found with the lees. Other constituents of the lees may be clay, sand, grape stones, and other extraneous impurities.

It is, of course, understood that the composition of lees differs widely, according to the different wines used, etc. Braconnet found in lees of red wines the following constituents:

	Per Cent.
Nitrogenous substances	20.70
Fatty substances { Soft greenish	1.60
{ White waxy	0.50
Gum,	
Red coloring matter, {	Undetermined.
Tannin,	
Tartaric acid salts of potash	60.75
Tartaric acid salts of lime	5.25
Tartaric acid salts of magnesia	0.40
Phosphate of potash, {	2.80
Sulphate of potash, {	
Phosphate of lime	6.00
Siliceous acid (sand)	2.00
Total	100.00

The transparent walls of the fungoid dregs are elastic, and consist mainly of cellulose. The contents are nitrogenous substances, mineral substances, etc., partially dissolved and partially in the form of minute grains. According to Payan, one hundred parts of fungus contain:

	Per Cent.
Nitrogenous substances	62.73
Cellulose	29.37
Fatty substances	2.10
Mineral substances	5.80
Total	100.00

The cell-covering deprived of its contents showed the following chemical composition:

	Per Cent.
Carbon	45.00
Hydrogen	6.10
Oxygen	48.90
Total	100.00

The contents of the cells show the following analysis:

	Per Cent.
Carbon	55.50
Hydrogen	7.00
Nitrogen	14.00
Oxygen	22.60

And besides this, the contents carry a small quantity of mineral ingredients.

The liquid dregs flow thickly, and are brownish or yellowish in the case of white wines, and muddy-reddish in red wines. More than half of the contents is wine, and even after permitting the lees to settle in separate barrels, they will mechanically hold at least half of their volume in wine.

The quality of the wine held by the lees is, of course, equal to that of the wine from which the lees was taken. The alcohol is of the greatest value of any of the components, and deserves the most attention.

On account of the manifold ingredients, there are numerous ways of using the lees. Up to the present time as little has been done in realizing on its value as has been done with pomace. The general prac-

tice has been to rush the lees through a still, or to get as much of the suspended wine as possible by pressing, and leaving the rest unnoticed.

In later years more attention has been given the matter on account of the valuable tartaric acid salts they contain, and the realization of these salts is already a branch of chemical industry. Either the producer or the merchant can utilize his lees and add considerably to his income by so doing.

VALUE OF THE LEES.

The value of the lees depends on the quantity of wine it carries, the percentage of alcohol in the wine, the percentage of tartaric acid, etc. The alcohol and the tartrates are the main factors which must be considered. Lees should be fresh from the wine vats to be of the greatest value, as on account of the large quantity of organic matter carried it is easy to spoil, and may be rendered of little or no value to the distiller or manufacturer of tartaric acid salts. If it is intentionally or unintentionally mixed with water, it will lose considerably in value. This not only diminishes the alcoholic content, but may dissolve some of the tartaric acid contained. This must be carefully watched in buying such materials.

Experience has shown that unspoiled lees give just as great a quantity of tartaric acid salts, comparatively, as alcohol. This affords an easy mode of determining the value of the lees. For this determination the well-known Salleron still is to be recommended.

Fig. 14.

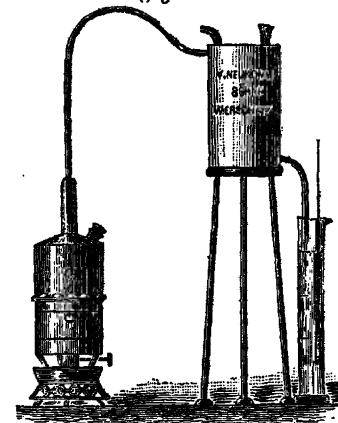


Fig. 14 shows a favorite Salleron. A copper kettle has been substituted for glass, which was used on the old stills, and a petroleum spirit lamp is used in the manipulation. The apparatus is thereby less likely to be damaged. If petroleum is used for instead of spirit, a considerable saving is effected.

To determine the quantity of alcohol in the lees the cylinder is filled up to the mark with the lees. The apparatus is closed, and the cooler by means of a pipe. The cooler, of course, is kept cool by running water. The lamp is lighted, and the contents of the still are boiled. Whatever distills off

glass cylinder shown in Fig. 14 by the cooler. When the cylinder is full to the mark in the middle, the distillation is stopped and the cylinder is filled to the top with pure water. There will now be in the cylinder as much water and alcohol as there were in the still to start with. The alcoholometer then gives the percentage of alcohol in the lees under examination. The percentage of tartaric acid salts in the lees is almost invariably proportionate to the alcoholic content, and this determination by the Salleron affords such a reliable means of getting at the value of the whole that almost any one can estimate it without resorting to chemical analysis. If these remarks are remembered, and it is proposed by the operator to buy lees, he will almost invariably come out ahead of what he expected.

SYSTEMATIC UTILIZATION OF LEES.

As with pomace, so can lees be used in one manner after another until everything of the slightest commercial value has been extracted. The process to which most lees are subjected is not by any means an exhaustive one, and in many cases it is certainly difficult, if not impossible, for the producer to get the full value for his material, as it is not in every district that tartaric acid factories are to be found which will have anything to do with lees. To sell them to distant factories and to ship them will scarcely pay, and there is great liability to spoiling and consequent deterioration on the way. It is always best for each wine producer to make the salts of tartaric acid, or to have some one in each district do the work required within a reasonable radius for all producers. Rather than sell to the chemical factories the producer or merchant should first use his own lees by pressing the wine from them, then distill, and out of the residue extract the tartaric acid. The tartaric acid can be obtained by the producer with more advantage than by the chemical factories, as the producer works under the more favorable circumstances. If the producer does not care to meddle with the production of the lime salts of tartaric acid, he can dry his sediment after getting out the brandy and wine, and dispose of it in that shape.

As has been said before, only fresh, unspoiled lees can be used for producing the tartaric acid. Should it be impracticable to work up the material at once, it can be barreled tightly. In a few weeks the lees will have so settled that considerable wine can be siphoned off.

The lees are then subjected to distillation, and then to the regular process of extracting the acid. Formerly only the potash salts and the tartaric acid were deemed of value, but now every acid component is extracted, and as a rule, every acid is secured, being first extracted as a lime salt. What remains can be used in making Frankfort black, as before described, or for fuel.

In distilling lees attention should be given to the production of ceananthic ether. How this can be effected in connection with distilling has already been described.

If the operator permits the lees to become spoiled to any extent, it is only fit for making vinegar, and even this is apt to be of poor quality. The spoiled lees will be found to be of little value for making tartaric acid salts.

Sediment gives wine a bad taste if permitted to stand for any length of time, and this taste will be communicated to the brandy.

It will be found that wine producers, to make the utilization of their lees pay, will have to work on a different system from that pursued in the large chemical factories which work to the same end.

Circumstances must decide the method of working up the lees. The methods used when working pomace can be applied more or less with lees, and at times the two can be worked jointly.

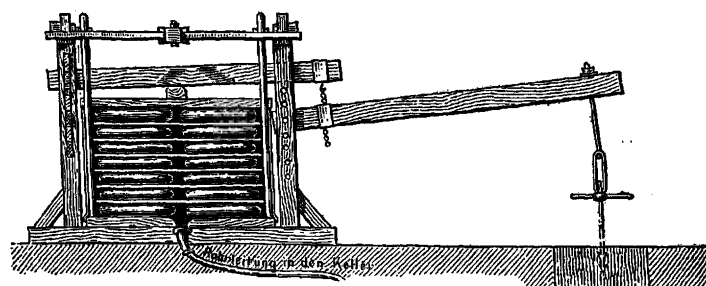
METHOD OF PRESSING LEES.

All the wine that can be possibly obtained from lees should be taken off some time between November and March—the sooner the better. Should the wine stay only half a year on the lees it will begin to acquire the bad taste which is so characteristic and objectionable. In former years the necessity for fining wine was not known, and the wine used to stay on the lees until sold, which often meant several years. Of course the wine was so objectionable that in some cases the subsequent pressing of lees was forbidden by law, and wine, even from fresh lees, was declared injurious to health.

While pressing the lees a cool temperature is absolutely necessary, and the air must be excluded as far as possible.

The pressing should not last over twenty-four or thirty-six hours. Different methods have been devised for securing the wine. Some put the lees in a sack, which hangs over a vat, and filter off the wine slowly; but this proceeding, although very simple, will give a stale, vinegary product. Neither can the method of forcing a linen sack into a tightly filled vat be recommended. A better way is to fill strong, seamless sacks with the lees, and submit them to pressure in a common wine press. The pressing has to be done slowly, for even if the lees is put in double sacks bursting may occur. The best and most practical presses are the old-fashioned stone presses which exert a steadily increasing force.

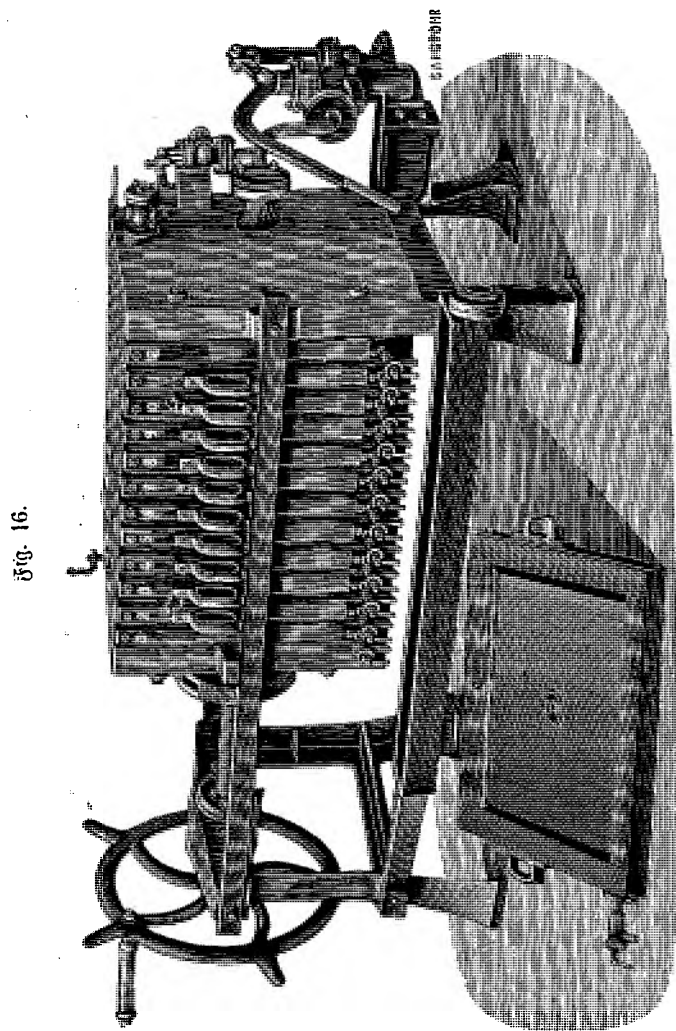
Fig. 15.



Only lately several machines for pressing lees have been introduced, of which the so-called decimal press has proved the most satisfactory. Fig. 15 represents one of these presses. It is built of larch or oak, and is bound with iron. The cut shows the construction of the press very fully. Boards are placed in the press between each layer of sacks before pressure is applied. After the operation is over, if the lees will bend before breaking, it may be taken for granted that a sufficient pressure has been applied. The wine is equally as good as that in the orig-

inal vats, but may have to be clarified several times in order to put it in first-class condition.

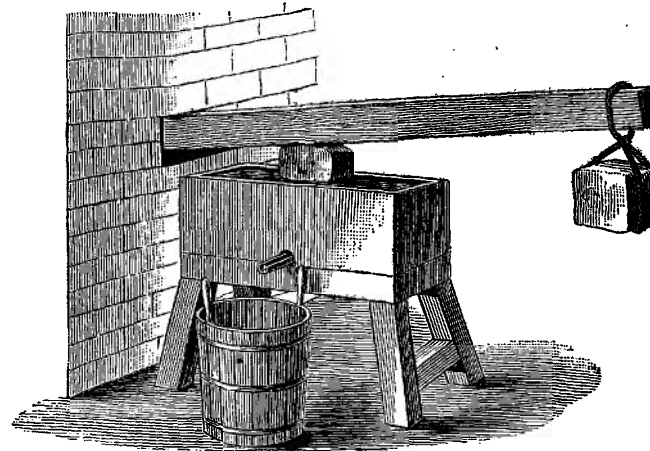
For large factories the so-called filtering press is very advantageous.



This press (Fig. 16) consists of a number of frames with perforated walls, and covered with a closely-woven pressing cloth. The frames are joined together by a screw arrangement, whereby as many filtering chambers are formed as there are filtering frames. The liquid lees is forced into these filtering chambers by means of a strong force-pump. The wine first runs off a trifle muddy, but is perfectly clear at last.

For pressing small quantities of lees the apparatus in Fig. 17 is to be recommended. The cut itself shows the manner of working.

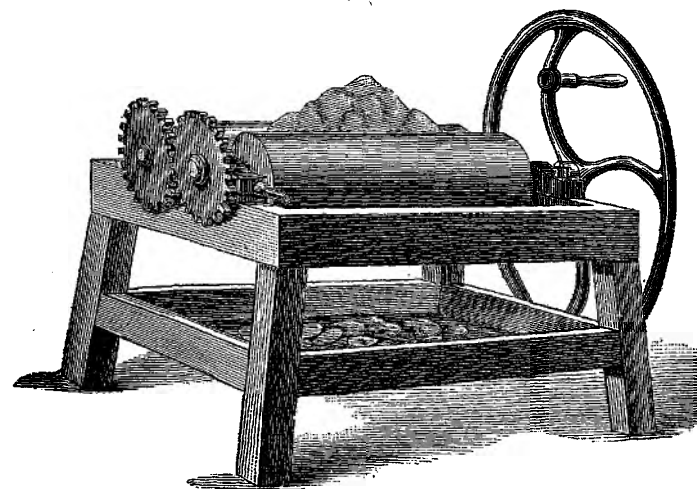
Fig. 17.



If the pasty lees cannot be worked at once, it should be packed tightly into barrels, and in this shape can stand long transportation without spoiling. The barrels should not be too large—those that hold from 150 to 200 kilogrammes (330 to 440 pounds) are best—and petroleum barrels will be found especially useful for this purpose.

Should the producer dry his pasty lees, instead of shipping it, the drying must be done as soon as possible, and is best done in these plates.

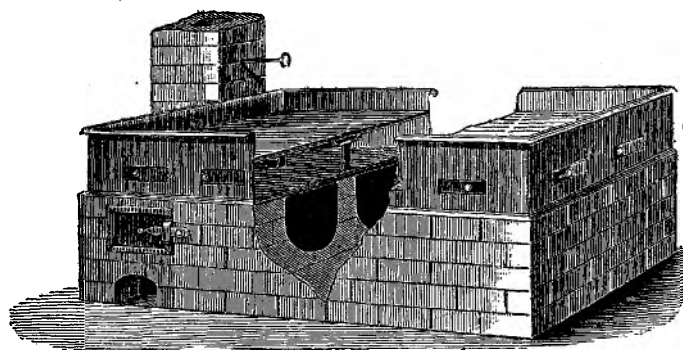
Fig. 18.



To break up the dried sediment the apparatus shown in Fig. 18 can be used. It explains itself.

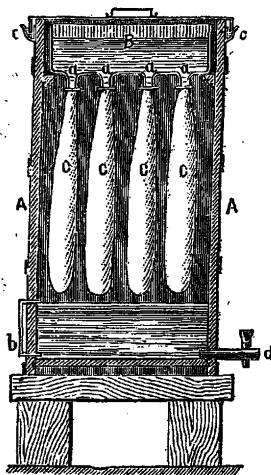
If thought advisable, or if absolutely necessary to crystallize the tartaric acid contained in the lees, a drying room, such as shown in Fig. 19,

Fig. 19.



will be found adapted to the purpose. The construction of this will show how it is used.

Fig. 20.



A filtering apparatus, such as is shown in Fig. 20, can also be used in extracting the wine from the lees. The process, however, is slow. The main essentials of this apparatus are the wooden vat *A*, on which rests the vessel *B*, which is either copper or zinc. From the bottom of this are hung the filtering bags *C*. The wine is afterwards drawn off at *d*. To keep this apparatus perfectly air tight, the vessel *A* is covered by a tin cover, which has a water joint at *c*.

PRODUCTION OF LEES BRANDY AND CENANTHIC ETHER.

Lees brandy is, as a rule, more aromatic than that from pomace. The quantity that will be obtained from any lot of lees depends on the alcoholic contents of that material. With pressed lees obtained as previously described, it will be found that water must be added before

distilling, to obtain a good product. The amount of brandy that will be obtained from this material runs all the way from 1 to 4 per cent. The brandy will always carry any unpleasant flavor that may have been communicated to the wine by the lees.

For handling lees a still such as is described for handling pomace can be employed. Steam heating is always preferable. The cenanthic ether should also be saved.

Ether is also produced from the lees, according to Rautert, in the following manner:

The sediment is filled into large wooden barrels, holding from 150 to 300 kilos (330 to 660 pounds), to be distilled at the time. The barrel should be only two-thirds filled. A strong jet of steam is introduced at the bottom of the barrel, and both the alcohol and ether are driven off, the former accumulating in large black drops. The apparatus described in Figs. 6 and 7 can be used for catching the drops. The distillation will last about five hours, so that about two runs can be made every day. The brandy produced during the process must, of course, be subsequently rectified.

To make this process pay the lees should be very thick before starting the jet of steam through it. Otherwise it will be too liquid before the end to permit the steam to drive off all the ether.

The lees, after the process, is drawn off into vats, and the tartar will then crystallize out from the liquor. This can be obtained with a sieve.

PRODUCTION OF THE TARTARIC SALTS.

Lees contain, after pressing and distillation, a considerable percentage of the tartaric acid, which should be obtained whenever possible. Until recently this was neglected, but now there is such an active demand for tartaric acid that the supply from the cooperage in wineries has proved insufficient, and it has been necessary to turn to other sources for supply. Pomace and lees naturally are looked to for supplying the deficiency.

If there is no factory for making tartrates near at hand the wine producer should extract all the valuable acid components of his pomace and lees from the liquor from distillation. He can best do this in the form of lime salts, which give the best chance to the factories for reworking into commercial products the material so obtained. These acid products are so valuable that in case there are no tartar factories near by, I would advise the wine producers in different sections to combine and have some one agree to work up the pomace and lees of all, after the distillation of either is over. In this manner the general prosperity of all persons engaged will be aided.

In distilling lees or pomace, either with a direct fire or with steam, the tartrates are dissolved in the water, and can be crystallized out when the liquor becomes cold. These crystals are called by the French *cristaux de lie*, and for some time have been saved by all operators. In other days the practice was to let the liquor from the stills cool in vats, whereupon the crystals would form on the sides. This method takes too much time, and is consequently too expensive. The best method is as follows: The liquor, with the spent lees or pomace, as coming from the still and while hot, are placed in a wine press (if lees is present bags must be used as well), and all the liquor is pressed out.

This contains the tartaric acid, as well as other acids. While still warm it is run into vats or tubs, and on cooling the tartrates settle in crusts on the sides of the vats or fall to the bottom. Much tartrate still remains in the solution, however, after it is cold. To obtain it without going to the expense of concentration, the brine is used in wetting down the next lot of pressed lees or pomace. In this way all the tartaric acid is saved, and works out in the next run. The crystallizing thus goes on, and after the last distillation the liquor is boiled down in a suitable copper kettle until a scum of crystals begins to form on top of the water. The boiled fluid then goes to the tub, to let the tartrate crystallize out, and so on until the mother liquor is all used up.

The lees can then be pressed and used for fuel, gas, or making Frankfort black.

In case the brandy is not distilled from pomace or lees before the above process is employed, it is necessary to boil with one and one half times as much water for one and one half hours, so as to set free the tartrates. If dried lees are used, four times as much water will have to be added.

The quantity of tartaric acid in lees is always variable, but it averages from 6 to 8 kilogrammes (13.2 to 17.6 pounds) from 100 kilogrammes (220 pounds) of liquid lees; whereas, from compressed lees fully 15 to 25 per cent of acid can be obtained.

To extract all the acid from lees it will have to be obtained in the form of lime salts. If operations are to be conducted on a large scale the following is the process:

After having distilled out the brandy, 2,500 kilogrammes (5,500 pounds) are placed in a large vat lined with lead and holding about 150 hectolitres (3,920 gallons). Add to this 50 kilogrammes (110 pounds) of raw tartaric acid, and fill the vat with water nearly to the top. The vat has an arrangement for stirring, and the contents are boiled with steam. The contents are permitted to stand a few hours, when the clear liquor is drawn off, and what remains behind is pressed out. Now mix chalk with the solution thus obtained, until no more free acid is present. The lime contained in the chalk combines with all acids present, and falls to the bottom. This forms crude lime salts of the tartaric acid, which can subsequently be worked into tartaric acid and other products.

The operation is substantially the same when conducted on a smaller scale.

PRODUCTION OF FRANKFORT BLACK.

Lees which has reached this stage of working, and which has had the alcohol and tartaric acid taken out, is now, like the pomace, available either for gas making or for making Frankfort black. The apparatus for making either of these is the same as described previously for making gas and Frankfort black from pomace.

LEES WINE.

Fresh lees may be used the same as pomace for making a cheap beverage resembling wine. This is done by adding the lees to a solution of water and sugar, and in many countries of Europe this is done. There are many modes of working recommended. According to Nessler, the best way is to take from 10 to 15 litres of lees to every hectolitre (26.4

gallons) of sugar water. This is made as strong as desired, according to the alcoholic content wanted in the wine. The wine in any event will be poor, and if possible spirit might be substituted for the sugar. Tannin and acid will also have to be added to make up any deficiency, say 400 grammes of acid and 10 to 15 grammes of tannin for every hectolitre. Whatever was said in the chapter about piquette—about the use of sugar—applies equally here. The manner of handling the wine is the same as the wine from grapes. Lees is even used a second time.

Another method is to dissolve 20 kilogrammes (44 pounds) of pure grape sugar and 5.5 kilogrammes (12 pounds) of cane sugar in 1 hectolitre (26.4 gallons) of soft water; then add the sediment of 1 hectolitre of wine, and let the whole ferment in a warm room. The vat is then filled up with a decoction of 6½ kilogrammes (14 pounds) of large raisins, digested in 7 litres of water. After eleven weeks you will draw off the young wine, and in a year it will be found to have a very pleasant taste.

OTHER METHODS OF USING LEES.

It has already been mentioned that gas and black can be made from spent lees. If this cannot be done the lees can be pressed into cakes and used as fuel, the same as pomace.

The ashes from these can be used the same as for preparing potash. Moreover, the spent lees contains a large percentage of protein substances, and for this reason is excellent fodder. Lees is also as good as pomace for a fertilizer.

CHAPTER V.

REALIZATION OF RAW TARTAR—CHEMICAL COMPOSITION OF RAW TARTAR.

After the sugar the tartaric acid is the most valuable component of grapes. In the grapes it is generally in composition as potash or lime salt. It has been mentioned before in this work how these salts can be produced, either from pomace or lees, and how the raw tartar is obtained.

These salts are soluble in any solution containing alcohol, but it will be found that even during the first violent fermentation of the grape juice some of them will be precipitated. After the fermentation is over some will be formed from the wine on the sides of the barrels or vessels in which the wine is. This is the common raw tartar. The crusts are always some salt of tartaric acid, usually potash or lime salts. There is also found some other sediment and some coloring matter.

There are two kinds of raw tartar—the white and the red. The white is really a brownish gray, and the red is dirty reddish. The structure is either amorphous, or else the exterior is coated with crystalline lime tartrates. The composition (and hence the value) depends on the country of production, etc. Some crude tartar will show only a trifle of lime in composition; others, again, run over 50 per cent of lime salts. In fact, tartar from the same country, and the same vineyard, may show very great differences in this respect.

As in estimating the value of tartar these two tartrates only are of

any great value, the other component parts, such as water of crystallization, sediment, clay, sand, oxide of iron, etc., have been disregarded.

The principal countries producing tartar are France (especially in the south), Austria, Hungary, southern Germany, Switzerland, etc. From Austro-Hungary large quantities are sent to England and Germany. France has a large home market to meet and exports little. This is also true of Switzerland.

Besides containing sediment, etc., tartar carries several other foreign substances not enumerated above, such as wood splinters, sulphur (which comes from sulphuring the casks), and careless handling may bring in clay and sand. If, however, the tartar contains over 1½ to 2 per cent of clay and sand, it may be taken for granted that they have been added intentionally. Occasionally a grape stone or grape skin will be found, but this is only when the cellarman has been very careless. Tartar is easily spoiled, and therefore must be handled carefully.

ADULTERATIONS OF RAW TARTAR.

Considering the importance of raw tartar as a commercial article, and its comparatively high price, it is not a matter of surprise that it is often adulterated.

The use of sand for this purpose is quite common. This can be detected by heating. Another adulteration is to mix it with the slaty crusts often seen in boilers. Once covered with tartar dust these resemble very much the natural, genuine article. The deception is detected by pouring a little acid over the inspected sample. Very often dried and pressed lees is worked in, and whether this occurred naturally or was added is sometimes difficult for the expert to decide. This adulteration not only diminishes the value of the tartar, but is a source of danger, inasmuch as if the tartar should by any accident be wet, the added sediment might start up a fermentation which would ruin the whole.

The agent must be constantly on his guard, and must insist that the goods shall be uniform, and guard against being imposed upon by a lot of selected crusts on the top of the package.

As a rule, in determining the value, the practice is to ascertain the quantity of the potash salts, and estimate accordingly. To make a good practical test, get an average sample, and pulverize. Take 2 grammes of the material; place in a glass vessel and add about 50 cubic centimetres of water; boil. To the boiling solution two or three drops of neutral litmus solution are added, and the solution at once turns red. A normal solution of soda (made of 31 grammes of soda to every litre of water) is added, drop by drop, until the solution turns blue. To neutralize 2 grammes of pure tartrate of potash, 10.64 cubic centimetres of the normal soda solution will be required, and proportionately, less.

Thus, for instance, if 7.9 cubic centimetres are used for neutralizing the solution, the percentage of acid tartrate of potash in the sample can be figured out this way: $10.64 : 100 :: 7.9 : (x)$. $(x) = 74.26$.

The following table can be used instead of making these calculations:

TABLE FOR TESTING TWO GRAMMES.

Cubic Centimetres Normal Solution of Soda.	Percentage of Acid Tartrate of Potash.	Cubic Centimetres Normal Solution of Soda.	Percentage of Acid Tartrate of Potash.	Cubic Centimetres Normal Solution of Soda.	Percentage of Acid Tartrate of Potash.
0.1	0.94	3.7	34.78	7.2	67.68
0.2	1.88	3.8	35.72	7.3	68.62
0.3	2.82	3.9	36.66	7.4	69.56
0.4	3.76	4.0	37.60	7.5	70.50
0.5	4.70	4.1	38.54	7.6	71.44
0.6	5.64	4.2	39.48	7.7	72.38
0.7	6.58	4.3	40.42	7.8	73.32
0.8	7.52	4.4	41.36	7.9	74.26
0.9	8.46	4.5	42.30	8.0	75.20
1.0	9.40	4.6	43.24	8.1	76.14
1.1	10.34	4.7	44.18	8.2	77.08
1.2	11.28	4.8	45.12	8.3	78.02
1.3	12.22	4.9	46.06	8.4	78.96
1.4	13.16	5.0	47.00	8.5	79.90
1.5	14.10	5.1	47.94	8.6	80.84
1.6	15.04	5.2	48.88	8.7	81.78
1.7	15.98	5.3	49.82	8.8	82.72
1.8	16.92	5.4	50.76	8.9	83.66
1.9	17.86	5.5	51.70	9.0	84.60
2.0	18.80	5.6	52.64	9.1	85.54
2.1	19.74	5.7	53.58	9.2	86.48
2.2	20.68	5.8	54.52	9.3	87.42
2.3	21.62	5.9	55.46	9.4	88.36
2.4	22.56	6.0	56.40	9.5	89.30
2.5	23.50	6.1	57.34	9.6	90.24
2.6	24.44	6.2	58.28	9.7	91.18
2.7	25.38	6.3	59.22	9.8	92.12
2.8	26.32	6.4	60.16	9.9	93.06
2.9	27.26	6.5	61.10	10.0	94.00
3.0	28.20	6.6	62.04	10.1	94.94
3.1	29.14	6.7	62.98	10.2	95.88
3.2	30.08	6.8	63.92	10.3	96.82
3.3	31.02	6.9	64.86	10.4	97.76
3.4	31.96	7.0	65.80	10.5	98.70
3.5	32.90	7.1	66.74	10.6	99.64
3.6	33.84				

After having found the number of cubic centimetres of normal solution necessary to neutralize the sample under test, the corresponding quantity of acid potassium tartrate in the sample can be found in the table. Sometimes in chemical analyses the total percentage of potash in the tartar is first determined, and then that present in the acid tartrate is found. This method is not, however, entirely reliable.

A normal solution of barytes can also be used instead of soda in making the determination. One litre must contain 76.5 grammes of barytes, and 10.64 cubic centimetres will neutralize 2 grammes of the acid tartrate of potash. The above table can consequently be used also.

The other methods of determining the value of the tartar are, as a rule, altogether too complicated to be used readily.

To determine the quantity of lime tartrate 100 grammes of the sample is raised to a red heat. The tartrate of potash turns to the carbonate, and the tartrate of lime to the carbonate as well. The potash can be leached out thoroughly, and the carbonate of lime is determined by the usual methods.

PRODUCTION OF TARTARIC ACID FROM RAW TARTAR AND TARTRATE OF LIME.

It is best in handling raw tartar to change it first to tartrate of lime, in which shape it is most easily worked. The process is in brief to dissolve the tartar in boiling water and mix the solution with carbonate of

lime. The acid tartrate of potash is by this means changed into the neutral tartrate, and the excess goes into combination with the lime. The neutral tartrate remains in solution. By adding sulphate of lime it is changed to sulphate of potash, with the formation of tartrate of lime.

By the use of sulphuric acid all the tartrate of lime made in both ways is turned into sulphate of lime and tartaric acid, the sulphate of lime precipitating. The tartaric acid can then be crystallized out.

By this process one hundred parts of acid potassium tartrate produce seventy-nine parts of tartaric acid.

The production of tartaric acid commercially, on a large scale, is done as follows: The raw tartar, of any kind, is sifted and all foreign particles removed as far as may be. The sifted tartar is then ground, placed in a vat, and ten times the quantity of water poured over it; that is, for every 100 kilogrammes (220 pounds) of tartar 1,000 kilogrammes (2,200 pounds) of water are added. The vat is made of wood, but is lined with lead, and a stirrer, also covered with lead, is provided. The stirrer is arranged to work by steam. The water is then boiled, and once boiling carbonate of lime is added, little by little. This can be well-ground marble or chalk, or even limestone. After having added the necessary quantity, boil for an hour, but keep constantly stirring. Then test the fluid for acid by means of litmus paper. Warm carbonate of lime must be added until the mixture does not show an acid reaction; that is, until all the acid is neutralized.

Care must be taken that too much carbonate of lime is not used. The surplus would stay mixed in the tartrate of lime, and would necessitate the use of more sulphuric acid in the last operation to remove it. This would be a dead loss.

The neutral tartrate is in solution, and is then changed to the tartrate of lime by adding the sulphate of lime (gypsum). Then boil several hours, still stirring the water. The sulphate of potash which is then formed, remains in solution and the tartrate of lime is easily separated.

The production of tartaric acid from the tartrate of lime now comes next. It is done by adding sulphuric acid. Care must be taken not to use too little acid. If too little is used, it is very difficult to crystallize out the tartaric acid in the presence of the tartrate, if, indeed it is not altogether impossible. To add too much is not advisable, as the crystals of tartaric acid would be liable to be browned. Experience is the only way by which the matter can be learned.

The quantity of sulphuric acid necessary to be added can be told by a chemical calculation the moment that the quantity of acid tartrate of potash is determined by the first test. Or it can be estimated by the quantity of carbonate of lime which had to be added to the solution to neutralize it. The ratio is usually about forty-nine parts of sulphuric acid to fifty parts of lime used, but this will always be found a trifle too high for the acid, as the lime will always carry moisture.

Before using in this work, concentrated sulphuric acid must be diluted with six times as much water. The best method to estimate the strength of sulphuric acid is by its specific gravity.

The following table shows the strength of sulphuric acid at 15.5° C. (60° F.):

Specific Gravity.	Percentage of Sulphuric Acid.	Specific Gravity.	Percentage of Sulphuric Acid.	Specific Gravity.	Percentage of Sulphuric Acid.
1.8485	100	1.7570	84	1.5760	68
1.8475	99	1.7465	83	1.5648	67
1.8460	98	1.7360	82	1.5503	66
1.8439	97	1.7245	81	1.5390	65
1.8410	96	1.7120	80	1.5280	64
1.8376	95	1.6993	79	1.5170	63
1.8336	94	1.6870	78	1.5066	62
1.8290	93	1.6750	77	1.4960	61
1.8233	92	1.6630	76	1.4860	60
1.8179	91	1.6520	75	1.4760	59
1.8115	90	1.6415	74	1.4660	58
1.8043	89	1.6311	73	1.4560	57
1.7962	88	1.6204	72	1.4460	56
1.7870	87	1.6090	71	1.4360	55
1.7774	86	1.5975	70	1.4265	54
1.7673	85	1.5868	69	1.4170	53

An approximation can be obtained by means of an acidometer. According to Beaume's acidometer the following table prevails:

	Specific Gravity.		Specific Gravity.
68°	1.84	45°	1.44
63°	1.77	40°	1.38
60°	1.70	35°	1.31
57°	1.65	30°	1.26
50°	1.52	25°	1.21

The treatment of the tartrate of lime must be done in lead-lined tubs, to prevent action by the sulphuric acid on the tubs.

After having poured the requisite quantity of diluted sulphuric acid on the tartrate of lime, the stirrer is started up and the mixture is boiled for one hour. Then the chemical reaction needed should be finished.

When the contents of the tub have settled and cooled the liquor is filtered. The frames of the filter had best be covered with lead, and a linen filtering cloth is stretched over them. The dissolved tartaric acid thus passes through the filter while the precipitated sulphate of lime is caught by the filter. The tartaric acid solution runs from the filter directly to the concentrating pans. These are flat wooden boxes lined with lead, and should stand in close proximity to the filtering apparatus, only a little distance below it. The concentrating pans each have a coil of lead pipe through which steam is made to pass, and which heats the solution up to 100° C. (212° F.). This temperature does not affect the tartaric acid, but causes the water to evaporate very rapidly. As soon as the surface of the liquor begins to show crystals the steam is shut off and the solution permitted to rest for an hour.

The washing of the sulphate of lime is done several times to get all the tartaric acid possible. The precipitated sulphate of lime can also be used earlier in the process instead of fresh gypsum.

When the tartaric acid solution is perfectly clear, it is racked off and run into crystallizing cylinders, which are made of lead and are about 1 metre high (39 inches) and 60 centimetres (19 inches) in diameter. The cooling is done slowly, so as to assist the formation of large tartaric acid crystals. The cylinders might be wrapped around with some non-conductor of heat, such as wool or straw, and covered with a tightly fitting lid to prevent too rapid cooling. It will take from four to eight days to complete the crystallization, when the mother water is run off.

If care has been taken, the crystals will, at first, be as white as snow. They should be lightly washed and are then ready for the market.

The mother liquor which is drawn from the crystals is boiled again. It gradually assumes a dark color, due to the growing concentration of the sulphuric acid contained, and to the influence of the acid on any organic ingredients which may be contained. To use up the mother liquor, it is diluted with water and neutralized, as before described, with chalk. The tartrate of lime obtained in this way must be worked up, as previously described. The tartaric acid crystals obtained from the mother liquor are always darker than those from the first run, and should be re-crystallized several times to clean them. The decolorizing may be facilitated by passing the acid solution through bone-ash, which, however, must be free from lime, and be boiled several times. It can be filtered in a linen filter, on a lead frame, and the crystals will be perfectly colorless.

Fig. 21.

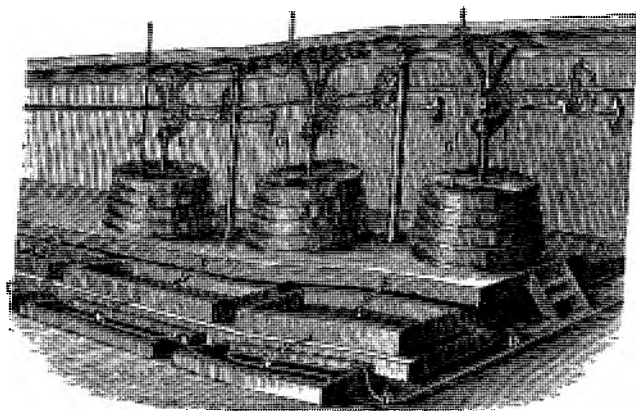


Fig. 21 shows the arrangement of a large tartaric acid factory, and the most needful apparatus. *A, A, A* are the dissolving tubs; *B, B, B* the filters; *C, C, C* the concentrators, each with the lead steam pipe, *D, D, D*; *E, E, E* are the cogs running the stirring apparatus. The pipes, *F, F, F*, convey the liquor from the tubs to the filters, and through *G, G, G* steam is introduced into the tubs. All those parts of the apparatus which come in contact with the sulphuric acid *must* be sheathed with lead, as this is one of the few metals which this acid cannot attack. Stoneware vats can be used in some few instances.

The size and number of the vats depend altogether on the scale on which operations are to be conducted. It will not pay to run the factory at spasmodic intervals, if it is contemplated to produce the acid from the tartrate of lime previously obtained from pomace and lees. It is not absolutely necessary to use gypsum (sulphate of lime) in the process of producing tartrate of lime from the raw tartar. Slacked quicklime can be used, or chalk or chloride of lime will do in appropriate quantities.

Pure tartaric acid forms good, large crystals, as clear as water, without smell, and of a pleasant acid taste. The specific gravity is 1.765, and

it can be dissolved in 1.8 parts of cold water. It is also soluble in alcohol, but not in ether. If it becomes moist on standing, it is safe to say that it carries sulphuric acid or chloride of lime. If it carries tartrate or sulphate of lime, it does not give a clear solution with alcohol. If it contains lime, an acid oxalate of lime will separate out if mixed with a solution of oxalate of ammonia. If sulphuric acid, or any sulphates are present, a solution in water will give a heavy precipitate if tested with barium chloride or any of the soluble barium salts. This precipitate is absolutely insoluble in acids. It should also be tested for nitric acid.

Various metals may be found in the acid, such as lead, copper, and zinc. Lead is particularly liable to be present, from the use of leaden linings to the tubs, etc. Sulphuretted hydrogen will produce a black precipitate in a solution of the acid, if black precipitate of either lead or copper is present; or a yellowish precipitate if zinc is there alone.

PRODUCTION OF CREAM OF TARTAR.

Tartaric acid, and especially the acid tartrate of potash, has a wide scope of use in medicine, in the arts, and in manufactures. Another important chemical compound of tartaric acid and two bases is tartar emetic, the double tartrate of potash and antimony.

But by all means the most important is the cream of tartar, and to produce it directly from the argols, they may be leached with ten times their weight in water, in wooden tubs, and boil. The tubs are then left for the contents to settle. The acid tartrate of potash (cream of tartar) is about all dissolved, while the tartrate of lime remains. Formerly no attention was paid to these lime residues thus remaining, but now it is found that if worked up in the regular factories they will about pay all expenses.

The clear solution is racked off from the insoluble residue. It carries a very little tartrate of lime. It is boiled and crystallized out as described before, and the crystals are washed and dried. The acid tartrate obtained in this manner still contains some coloring matter and a little lime tartrate, and is called half refined tartar. To purify it it is boiled with hot water, and the color removed by adding 5 per cent of the weight of the tartar of bone-ash containing no lime. The first crystals and crusts will be found perfectly pure.

Cream of tartar forms white, hard crystals of a slightly acid taste. It is perfectly insoluble in alcohol, but is dissolved readily in alkaline solutions.

The neutral tartrate of potash is also a well-known commercial substance, obtained best by neutralizing the acid tartrate (cream of tartar) with carbonate of potash. To effect this 36.7 parts of the carbonate should be taken to every 100 parts of the acid tartrate.

The carbonate of potash is first dissolved in water, and then the solution is neutralized by adding the acid tartrate, the operation ending when foaming ceases. The solution should be made a trifle acid with the acid tartrate, and finally neutralized with carbonate of potash. If ordinary cream of tartar is used, there will be some tartrate of lime present, which, however, will settle out in the course of three or four weeks. The solution of neutral tartrate is then poured off and crystallized. These crystals are pure enough for medicinal purposes. The salt,

when pure, appears in brilliant rhomboidal crystals. It has no smell, a salty taste, and has a specific gravity of 1.96.

Another important salt is the double tartrate of soda and potash—Rochelle salts. This salt was first produced in 1672, but the method was guarded as a secret until 1731, when the process of neutralizing a solution of cream of tartar with soda was discovered. To effect this 28.2 parts of the anhydrous carbonate, or 76.1 of hydrous carbonate (the crystallized), will be required for every 100 parts of cream of tartar. The soda is dissolved in hot water (3 parts to 20), and the solution is neutralized with cream of tartar. The tartrate of lime, if any is present, will settle out in a few days, and the liquor is filtered; and crystallization is brought about as heretofore described.

Pure tartrate of soda is made from tartrate of lime in the same manner as tartrate of potash is made, using sodium carbonate instead of potassium carbonate in the processes previously described.

Rochelle salts (double tartrate of soda and potash) crystallizes in large columnar crystals as clear as water, has no smell, has a mild salty taste, and a specific gravity of 1.78. It dissolves in 2.5 parts of cold and less than one part of boiling water, and is only slightly soluble in alcohol. A solution in water has a neutral reaction. If boiled too much a change will occur in the salt, and nothing will be left but carbonate of soda and potash.

Another important salt is the double tartrate of antimony and potash, commonly called tartar emetic, first produced in 1631. It is usually manufactured by boiling a solution of cream of tartar with the oxide of antimony. The solution is quickly filtered and heated with steam until it crystallizes. After a few days the crystals are placed on a filter, washed with water and dried. The mother liquor which remains may contain the tartrate of antimony, which can be crystallized out afterward. If the cream of tartar used in making tartar emetic contains any lime, it is best to add a little carbonate of potash to the still hot solution, whereby the lime is precipitated as carbonate of lime before filtering.

It is necessary, in the production of tartar emetic, to know the exact quantity of materials to be used. This can only be obtained by figuring from the chemical reaction. If too little oxide of antimony is used, the tartar emetic will still contain some cream of tartar; and if too much is used, part of it will remain undissolved.

Tartar emetic forms rhomboidal crystals, as clear as water, which lose in the air their water of crystallization, and become friable and disintegrate. Taken in small quantities, this salt produces violent vomiting, and in large quantities it is poisonous. It should not give off a garlic-like smell if heated on an iron spoon; if it does, the antimony contains some arsenic. A solution in water should not get muddy on the addition of the oxalate of ammonia; if it does, it contains lime. If the solution gives a precipitate with chloride of barium, it contains sulphuric acid or sulphates.

Another important salt is the tartrate of iron and potash, made by mixing six parts of pulverized cream of tartar and one part of iron filings with sufficient water to make a thin paste. The water is renewed as it evaporates. After two or three weeks the paste is greenish black. It is then dried.

Tartrate of iron and potash is a grayish or greenish-black powder

which comes from the process in the form of black globules. It tastes mild and sweet; has no smell; becomes moist in the atmosphere without dissolving, but can be readily dissolved in water. It is used in medicine. Another, but less important salt, is the tartrate of ammonia and potash. Another is the tartrate and borate of potash.

IMPORTANCE OF TARTARIC ACID AND ITS SALTS IN MEDICINE AND COMMERCE.

Tartaric acid and its many salts are used in large quantities in the industrial arts and in chemistry. It has been a long time since the demand was met by the natural formation of the tartar in wine barrels, and year by year the increase is so great that there is an imperative demand for the use of all available pomace and lees. In many industries tartaric acid and the tartrates are absolutely necessary, and cannot be replaced by anything else.

Tartaric acid itself is largely used in medicine, in making effervescing powders and beverages, in making lemonade, and in great quantities in wool-dyeing establishments and cloth weaving. In Europe, for making artificial wines, it has a large demand.

Natural cream of tartar, of course, is the main source of tartaric acid. It was formerly used for making chemically pure carbonate of potash. It is widely used in medicine, and in the chemical works it has many useful applications. In the arts it is used during the process of bleaching tarnished silver articles and during the process of tinning brass. In America it has an immense application in the manufacture of the so-called baking powders, which replace in many instances the use of yeast.

The neutral tartrate of potash is also used in medicines. As early as 1848 Liebig recommended its use for reducing the free acid in wine, and it is very extensively used in France for that purpose.

Rochelle salts, another tartrate, finds its principal use in medicine, being mildly aperient, and forming the main ingredient of the well-known seidlitz powders.

Tartar emetic, tartrate of iron and potash, and the tartrate of potash and ammonia, also have a wide use in medicine.

APPENDIX D.

STATEMENT OF THE IMPORT DUTIES OF ALL THE PRINCIPAL COUNTRIES TO WHICH CALIFORNIA WINES, BRANDIES, AND RAISINS ARE OR MAY BE EXPORTED.

Prepared by WINFIELD SCOTT, Secretary of the Commission.

STATEMENT OF THE IMPORT DUTIES

OF ALL THE PRINCIPAL COUNTRIES TO WHICH CALIFORNIA WINES,
BRANDIES, AND RAISINS ARE OR MAY BE EXPORTED.

Prepared by WINFIELD SCOTT, Secretary of the Commission.

Demands are frequently made at the office of the Board of State Viticultural Commissioners for a reliable statement of the tariffs of the principal foreign countries to which the viticultural products of California are at present, or may be in the future, exported, whether from San Francisco or from Atlantic ports. These statistics have been collected from the Consuls of the various countries, resident in San Francisco, and are therefore official and correct.

WINFIELD SCOTT,
Secretary.

ENGLAND AND HER COLONIES.

ENGLAND.

Wine, in casks, not over 30° proof.....	1 shilling per gallon.
Wine, in casks, between 30° and 42° proof.....	2 shillings 6 pence per gallon.
Wine, sparkling, under 30° proof.....	1 shilling per gallon.
Wine, sparkling, between 30° and 42° proof.....	2 shillings 6 pence per gallon.
All wines over 42° proof.....	3 pence additional for each degree.
If sparkling and in bottles, if not worth over 15 shillings.....	1 shilling per gallon additional.
If over 15 shillings.....	2 shillings 6 pence per gallon additional.
Spirits.....	10 shillings 10 pence per proof gallon.
Spirits, not tested, as in cordials.....	14 shillings 8 pence per gallon.
Spirits, if bottled and in bond.....	3 pence per dozen.
Perfumed spirits.....	17 shillings 3 pence per gallon.
Raisins.....	7 shillings per hundredweight.

NOTE.—Grape brandy from countries other than France cannot be entered as cognac.

CANADA.

Wine, up to 26 per cent alcohol.....	25 cents per gallon and 30 per cent ad valorem.
Wine, each degree between 26 and 40 per cent.....	3 cents per gallon.
Wine, sparkling.....	\$3 per dozen and 30 per cent ad valorem.
Brandy.....	\$2 12 per imperial gallon.

NEWFOUNDLAND.

Claret.....	51 cents per gallon.
Spanish reds and Italian.....	35 cents per gallon.
Malaga.....	35 cents per gallon.
Port and Madeira.....	\$1 65 per gallon.
Hock and Burgundy.....	\$1 per gallon.
Champagne.....	\$3 per gallon.
All other.....	15 per cent and 90 cents per gallon.
Brandy.....	15 per cent and \$2 40 per gallon.

QUEENSLAND.

Wine, sparkling.....	10 shillings per gallon.
Wine, all other.....	6 shillings per gallon.
Brandy.....	14 shillings per gallon.
Brandy coloring, having over 35 per cent alcohol.....	12 shillings per gallon.
Raisins.....	2 pence per pound.

TASMANIA.

Wine, sparkling	10 shillings per gallon.
Wine, all other, in wood	6 shillings per gallon.
Wine, all other, in bottles	8 shillings per gallon.
Brandy	15 shillings per gallon.
Brandy coloring, over 35 per cent alcohol	15 shillings per gallon.

NEW ZEALAND.

Wine, sparkling	13 shillings per gallon.
Wine, all other, except Australian, containing less than 40 per cent proof spirits	6 shillings per gallon.
Wine, Australian, containing not more than 35 per cent proof spirits	5 shillings per gallon.
Spirits in bottles, jars, etc.	14 shillings per gallon.
Spirits in bulk, jars, etc.	15 shillings per gallon.
Raisins and dried fruit	2 pence per pound.

NOTE.—There is a discrimination of 1 shilling per gallon in favor of Australian wine.

NEW SOUTH WALES.

Wine, sparkling	10 shillings per gallon.
Wine, all other	5 shillings per gallon.
Brandy	14 shillings per gallon.
Brandy coloring, containing over 35 per cent alcohol	14 shillings per gallon.
Raisins	2 pence per pound.

VICTORIA.

Wine, sparkling	8 shillings per gallon.
Wine, all other	6 shillings per gallon.
Brandy	12 shillings per gallon.
Brandy coloring, containing over 35 per cent alcohol	15 shillings per gallon.
Raisins	2 pence per pound.

SOUTH AUSTRALIA.

Wine, sparkling	10 shillings per gallon.
Wine, all other, up to 35 per cent proof	6 shillings per gallon.
Brandy	14 shillings per gallon.
Brandy coloring, containing over 35 per cent alcohol	14 shillings per gallon.
Raisins	2 pence per pound.

CEYLON.

Claret, bottled	1 rupee and 25 cents per gallon.
Claret, bulk	50 cents per gallon.
Sparkling wines	50 cents per gallon.
All other wines, bottled	1 rupee and 50 cents per gallon.
All other wines, bulk	1 rupee per gallon.
Spirits	4 rupees per proof gallon, and 50 cents for every 10° over proof.

FIJI ISLANDS.

Claret and Australian wines, bottled or bulk	2 shillings per gallon.
All other still wines	4 shillings per gallon.
Sparkling wines	6 shillings per gallon.
All spirits	14 shillings per gallon.

NEW GUINEA.

Spirits	12 shillings per gallon.
Sparkling wines	6 shillings per gallon.
Other wines	4 shillings per gallon.

JAMAICA.

All wines	2 shillings 6 pence per gallon.
All spirits	10 shillings per gallon.

TRINIDAD.

Wines, sparkling	4 shillings per gallon.
Wines, all other, bottled, under 35 per cent alcohol	2 shillings 6 pence per gallon.
For each degree over 35 per cent	3 pence.
Wines, all other, in wood, up to 22 per cent	8 pence per gallon.
Wines, all other, in wood, up to 32 per cent	1 shilling per gallon.
Wines, all other, in wood, up to 42 per cent	2 shillings 6 pence per gallon.
For each degree above 42 per cent	3 pence.
Brandy	9 shillings per gallon.

BERMUDA.

Wine	20 per cent ad valorem.
Alcohol and all distilled liquors	4 shillings per gallon.

BRITISH GUIANA.

Wine, not over 26 per cent proof and not over \$2 per gallon	50 cents per gallon.
Wine, bottled	\$1 per dozen pints.
Wine, all other	80 cents per gallon.
All spirituous liquors	\$2 50 per proof gallon.

CAPE COLONY.

Wine	6 pence per imperial gallon.
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OTHER COUNTRIES.

FRANCE.

Alcohol and distilled liquors of all kinds	30 francs per hectolitre.
Liqueurs	30 francs per hectolitre.
Wine from countries not in commercial union with France	1 franc and 50 centimes per hectolitre for each degree of alcohol up to 11°; and for each degree above 11°, 2 francs and 65 centimes.
Wines from countries in commercial union with France or with a special treaty	70 centimes per hectolitre per degree of alcohol up to 11°; and 2 francs and 65 centimes for each degree above 11°.
Maximum duty: 1 franc 20 centimes per degree up to 11°, and 1 franc 65 centimes for each degree above 11°, alcohol.	
Minimum duty: 70 centimes per degree up to 11°, and 1 franc 65 centimes for each degree above 11°, alcohol.	

GERMANY.

Wine, in casks, leather bottles, or jugs of at least 50 kilogrammes gross weight	24 marks per 100 kilogrammes.
Wine, in small bottles or small leather bottles or jugs	Same as wine.
If sparkling, 80 marks per 100 kilogrammes; if still, 48 marks per 100 kilogrammes.	
Fruit wines and cider not included.	
Dried grapes	24 marks per 100 kilogrammes.
Fermented grapes	Same as wine.
Fruit brandies	180 marks per 100 kilogrammes.
Wash and singlings	Free.

GERMANY, WITH COUNTRIES IN ZOLLVEREIN.

Red wine and must in casks for blending purposes	10 marks per 100 kilogrammes.
Other wines	20 marks per 100 kilogrammes.
Wine for distilling	10 marks per 100 kilogrammes.

ITALY.

Wine in casks	20 francs per hectolitre.
Wine in bottles	60 francs per 100 bottles holding not over 1 litre.

RUSSIA.

Arrack, rum, brandy (French), and prune brandy in casks	12 rubles per pud, brutto.
Grain spirits in bottles, liquors, kirchwasser, gin, whisky, and all spirits flavored with various fruits, also arrack, rum, French brandy, and prune brandy	1 ruble per bottle.
Wine of grapes—	
All imported in wood	4 rubles per pud, brutto.
Not mousseux	45 copecs per bottle.
All kinds mousseux	1 ruble 40 copecs per bottle.
Raisins	1 ruble 80 copecs per pud.
Remarks.—If wines are above 16° alcohol they are subject to additional duty of 12 copecs per degree above 16°.	
One pud is equivalent to 32 pounds.	
All duties payable in gold.	

SPAIN.

Wine, sparkling	150 pesetas per hectolitre.
Wine, all other	50 pesetas per hectolitre.
Brandy	20 pesetas per hectolitre.
Other distilled liquors	1 peseta per litre.
All preserved and dried fruits	1 peseta per kilogramme.

DENMARK.

Wine and fruit juice, unfortified, in bottles	13.44 cents per pot.*
Same in barrels	2.73 cents per pound.
Grape wine, in casks	22 per cent ad valorem.
Grape wine in stone jars	45 per cent ad valorem.
Liquors which cannot be graded	13.44 cents per pot.
Same, 8° strength or under	50.4 cents per eight pots
Same, for each ¼ degree over 8°	1 cent per eight pots

SWEDEN.

Wines, all kinds, not exceeding 21 per cent of alcohol	15 ore per litre.
Wines, all kinds, between 21 per cent and 25 per cent of alcohol (in casks)	30 ore per kilogramme.
Wines, all kinds, between 21 per cent and 25 per cent of alcohol (in other packages)	65 ore per litre.
Wines, all kinds, over 25 per cent of alcohol	1 krone 50 ore per litre.
Brandy and spirits in casks and made from grapes in any other country than France	75 ore per litre of 50 per cent alcohol at 15° C.
Same in other packages (regardless of the percentage of alcohol)	1 krone 11 ore per kilogramme.
Raisins	14 ore per kilogramme.
No allowance for tare.	

NORWAY.

Wines, not exceeding 21 per cent alcohol, in casks (16 per cent for tare)	11½ ore per kilogramme.
Wines, not exceeding 21 per cent alcohol, in bottles	11½ ore per litre.
Wines, between 21 per cent and 25 per cent alcohol, in casks (16 per cent for tare)	36 ore per kilogramme.
Wines, between 21 per cent and 25 per cent alcohol, in bottles	36 ore per litre.
Wines, over 25 per cent alcohol	Same as brandy 100 proof.
Brandy, in bottles	1 krone 60 ore per litre.
Brandy, in other packages, 100 proof (16 per cent tare for casks)	1 krone 71 ore per litre.
Raisins (20 per cent tare on cases)	12 ore per kilogramme.

BELGIUM.

Alcoholic liquors (distilled) used as beverage, up to 50° strength; Gay Lussac at 15° C., in casks	100 francs per hectolitre.
Same, each degree in excess of 50°	2 francs per hectolitre.
Same, in bottles, regardless of strength	200 francs per hectolitre.
Wines (subject to Internal Revenue tax of 23 francs per hectolitre)	Free.
Wines, over 18 per cent alcohol	Excess at the rate for alcoholic liquors.
Raisins	25 francs per 100 kilogrammes.

SWITZERLAND.

Dried raisins for wine making	20 francs per 100 kilogrammes.
(N. B.—Dried raisins for wine making pay, besides the duties, an internal tax, to be fixed later.)	
Juice from fruit or berries, evaporated fruit juice, without sugar, with or without alcohol	20 francs per 100 kilogrammes.
(N. B.—Subject also to an internal tax, to be fixed later.)	
Wine in casks—natural	3.50 francs per 100 kilogrammes.
Wine in casks—artificial	7 francs per 100 kilogrammes.
Wine in bottles—natural	25 francs per 100 kilogrammes.
Wine in bottles—artificial	50 francs per 100 kilogrammes.
(N. B.—Artificial wines pay double the duty of natural wines. The natural wines containing over 13° of alcohol, and the artificial wines containing over 12° of alcohol, pay for each degree above an internal tax of 80 centimes and a supplemental duty of 20 centimes per 100 kilogrammes. Natural wines are considered the products of the fermentation of fresh grapes, without any other admixture.)	
Sparkling wines, in bottles	40 francs per 100 kilogrammes.
Spirits of wine and alcohol, in casks per centesimal degree of pure alcohol measured with the alcoholometer of Tralles	20 francs per degree and per 100 kilogrammes.
Brandy and other alcoholic drinks, such as cognac, rum, arrack, etc., which are not liquors in the ordinary sense, that is, which contain neither aromatics nor sugar:	
In casks, per degree of pure alcohol measured with the alcoholometer of Tralles	20 francs per degree and per 100 kilogrammes.
In bottles or jars, without regard to alcoholic measures	30 francs per 100 kilogrammes.

*4.7 pots equal 1 gallon.

TURKEY.

Wines and brandies	8 per cent ad valorem.
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HAWAII.

Alcohol and other spirits	\$10 per gallon.
Alcohol for medicinal uses	\$3 per gallon.
Brandy, etc. (between 30 and 55 per cent of alcohol and above 55 per cent pro rata)	\$3 per gallon.
Champagne	\$6 per dozen quarts.
Sparkling Moselle and Hock	\$4 per dozen quarts.
Wines, dry, quarts	40 cents per dozen.
Wines, dry, pints	40 cents per two dozen.
Wines, dry, in bulk	15 cents per gallon.
Wines, fortified, between 21 and 30 per cent alcohol	\$2 per gallon.

MEXICO.

Wine, red or white, in glass, no allowance for leakage or breakage	20 cents per kilogramme (net weight).
Same in wood	10 cents per kilogramme (net weight).
All other spirituous liquors under same conditions	25 cents per kilogramme (net weight).
Raisins	10 cents per kilogramme (net weight).

SALVADOR.

Vinous liquors	5 cents per kilogramme (gross).
Distilled liquors	30 cents per kilogramme (gross).
Raisins	10 cents per kilogramme (gross).

NICARAGUA.

Still wines	3 cents per pound (gross).
Sparkling wines	5 cents per pound (gross).
Distilled liquors (between 12° and 25° alcohol)	40 cents per pound (gross).
For every degree above 25	3 cents per pound (gross).

N. B.—A reciprocity treaty with the United States is being concluded.

COSTA RICA.

Red or white wines in bottles	3 cents per kilogramme (gross).
Red or white wines in bulk	5 cents per kilogramme (gross).
Fortified wines in bottles	9 cents per kilogramme (gross).
Fortified wines in bulk	13 cents per kilogramme (gross).
Liquors (whose introduction is allowed in barrels)	30 cents per kilogramme (gross).
Liquors (introduced in other packages)	60 cents per kilogramme (gross).
Cognac and all brandies (in barrels or demijohns)	80 cents per kilogramme (gross).
Cognac and all brandies (in other packages)	60 cents per kilogramme (gross).
All dried fruits, including raisins	13 cents per kilogramme (gross).

GUATEMALA.

Red wines (in whatever packages)	25 cents per bottle.
White wines (in whatever packages)	28 cents per bottle.
Sherry (in whatever packages)	28 cents per bottle.
All others	35 cents per bottle.
Brandy and all spirits up to 20° Baumé	63 cents per bottle.
All dried fruits	7 cents per pound.

HONDURAS.

Wines, in cask or bottle	2 centavos per pound.
Brandies, in cask or bottle	30 centavos per pound.
All dried fruits	8 centavos per pound.

ECUADOR.

Wine	10 centavos per kilogramme (gross).
Brandy	Cane brandy prohibited.
Other brandy	25 centavos per kilogramme (gross).
Raisins	5 centavos per kilogramme (gross).

COLOMBIA.

Claret, in barrels or demijohns	2½ cents per kilogramme.
White wine, in barrels or demijohns	5 cents per kilogramme.
All other wine	40 cents per kilogramme.
Brandy and distilled liquors	40 cents per kilogramme.
Raisins	20 cents per kilogramme.

CHILE.

Red wines, in bottles.....	\$2 25 per dozen.
Red wines, in wood.....	25 cents per litre.
White wines, in bottles.....	\$3 per dozen.
White wines, in wood.....	22 cents per litre.
Wine spirits.....	50 cents per litre.
Cognac.....	\$4 per dozen.
Cognac, in wood.....	42 cents per litre.

VENEZUELA.

Wines for medicinal purposes.....	1.25 bolivares* per kilogramme.
Bordeaux and Spanish reds.....	.25 bolivares per kilogramme.
All others.....	.75 bolivares per kilogramme.
Sweet liquors (not rectified).....	1.25 bolivares per kilogramme.

CHINA.

Wines and brandies.....	Free.
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* One bolivar equals 19.3 cents.

APPENDIX E.

WINE.

CLASSIFICATION—WINE TASTING—QUALITIES AND DEFECTS.

By PROF. G. GRAZZI-SONCINI, Director of the Royal School of Viticulture,
Alba, Italy.

Translated by F. T. BIOLETTI, of the Agricultural Experiment Station
(Viticultural Section), University of California, Berkeley, California.

BERKELEY, September 1, 1892.

AUTHOR'S PREFACE.

ROYAL SCHOOL OF VITICULTURE AND OENOLOGY, }
ALBA, PIEDMONT, ITALY, January, 1892. }

A preface should give an immediate idea of what the author has proposed to do in writing his book. As Balbo rightly says in the preface to one of his books:

"It is the duty of every writer to give the reader a terse and clear idea of the work which he presents him. This sincerity benefits both: the reader, because it puts him in the position of knowing whether or not the book is likely to be of interest or utility to him; the writer, because, whilst it may reduce the number of his readers, it insures him more interested, attentive, and indulgent ones.

"The clearest and most sincere way of giving an explication of the object of a book is to tell how it was written."

Thus I will explain, as well as possible in a few words, why I have written this book, which treats especially of the classification, the qualities, and the defects of wine.

When I commenced to give particular attention to viticulture and oenology, I soon perceived that in oenology, and especially in that part which regards classification, qualities, and defects, all authors were not in accord in their use of terms to express the same characters. Thus, for example, some would mean by "sève," a slight sweetness in the wine; others by the same term would intend to express that character by which a wine of good quality affects the mouth and olfactory organs with a certain perfume, for a longer or shorter time after it has been swallowed.

I will say nothing of the classification of wines according to dishes, as wine to be drunk with oysters, fish, roast meat, etc., which shows a marked tendency to become a veritable chaos. In this classification, the work of Mr. Bertall, "*La Vigne-Voyage Autour des Vins de France*," is taken too literally.

How could one speak of the classification of wine, of its qualities, of its defects, without giving some explanation of the mode and proper conditions for tasting? It is for this reason that I have devoted a chapter to the tasting of wine, a chapter, moreover, of great importance, as it is by tasting, more than by chemical analysis, that we can best judge of the constitution and future of a wine. Who is a better judge than an experienced taster of the bad flavor produced in wine, for instance, by the tartaric fermentation, which even in its incipency he can detect by a certain burnt taste, which, with the progress of the malady, gradually develops into an insupportable bitterness? Among these gradations of bitterness we do not find that slight bitterness peculiar to certain wines, such as Barolo and Gattinara.

Chemical analysis gives us the principal components of wine, and from the presence or absence of certain of these and from their proportions, some judgment may be formed of the character of the wine. The

taster alone is able to detect diseases at their incipency, and, one might almost say, before they have commenced, whilst the chemist can only state the final consequence. In other words, one might say that whilst the chemist is limited to making a diagnosis, the taster can make a prognosis.

In the case of some defects of wine, I have not confined myself to a simple definition or description. I have also added notes, brief in some cases, more extended in others, on the determining causes and the means of prevention or cure. I have done this, believing it would be useful to the taster or the dealer, who is not always fully informed on all the details of technical oenology. With this information for a guide, he will be better able to judge of the relative gravity of this or that defect, and the dealer especially will be able to judge of the utility or inutility of attempting to cure a wine of a certain defect.

I have also tried—wishing to be useful to the greatest possible number of readers—not to neglect a secondary part, which has its importance in tending to make the consumer better appreciate the wine he drinks. Profiting by the *Consigli di un amatore di vini*, I have indicated the form of glass to be used with each kind of wine, how wines should be presented and distributed during the repast, and how they should be drunk. In this part, which I have called secondary, it is not to be denied that fashion is the determining factor.

And now the reader may judge if I have succeeded in my intentions. Even though his judgment should not be favorable, I shall consider myself fortunate in being the first—as far as I know—to call attention, in an extended manner, to this part of oenology, which in former treatises on the subject has been but lightly touched upon.

G. GRAZZI-SONCINI

TRANSLATOR'S PREFACE.

AGRICULTURAL EXPERIMENT STATION, UNIVERSITY OF CALIFORNIA,
BERKELEY, CAL., September 16, 1892.

Professor Grazzi-Soncini's book, which has been already translated into French, fills a void in the literature of oenology. The part dealing with the defects of wine, the diseases to which it is subject, and the methods, when such exist, of remedying these diseases, will perhaps be of the most practical value to the wine grower. The part which regards tasting and classification, however, is worthy of careful reading, and many hints may be drawn from it that will be of use towards the attainment of that most desirable object: the production of constant types of wines—an object which is too little studied in California, but on which our hopes of building up a trade in high-class wines very largely depends.

Many of the numerous terms which the French and Italians have invented for the technical consideration of wine it is impossible or difficult to translate into English, and for this reason the translation necessarily lacks some of the scientific precision and clearness of the original. I have however attempted, wherever possible, to give the English equivalent of the term used by the author, and have also given the French term, in this way making a glossary in the three languages, which may possibly be of use in developing a uniform set of technical terms on this subject in our own language.

If this book should be of any use to the wine maker, and especially if it should call the attention of non-wine-drinking people to some of the uses and beauties of wine which they did not suspect, the translator will feel amply repaid for his trouble.

F. T. BIOLETTI.

WINE AND THE ART OF WINE TASTING.

By G. GRAZZI-SONCINI.

INTRODUCTION.

Wine is simply the juice or must of the grape after it has undergone the process of fermentation.* This may be considered as the most natural and exact definition that can be given of it. It is the definition accepted by the law.

On account of the prevalence of sophistications and the considerable amount of wine that is now made from dried grapes and other saccharine fruits, a more particularized definition of wine is now given; it may be formulated as follows:

By wine is understood that liquid which is obtained by the alcoholic fermentation of the juice or must of fresh grapes. This must may be fermented in contact or not with the pomace or solid portion of the grapes, without, however, the addition of any extraneous substance or even of substances chemically the same as those that the grapes them-

*Although as Gautier writes, "Wine is a very complex body, and so delicate that the work of chemists, so far, has been but an outline of what there is to do in the study of it," I think it will be useful, because it will give a more complete idea of the subject of our remarks, to give a list of the principal components of grapes, or must, and of wine:

A. SOLID BODIES.

Stems: Lignose—Tannin—Albuminoids—Organic salts and acids—Mineral salts and acids—Chlorophyll—Gummy matters—Phosphates—Potash, lime, magnesia, silica.

Skins: Cellulose—(Enocyanin—(Enorubin—Tannin—Cream of Tartar—Catechin—Quercite (?)—Waxy matters, ferment germs—Etherous and aromatic principles—Nitrogenous substances—Phosphates—Potash, lime, magnesia, iron, silica.

Pulp: Cellular parenchyma—Nitrogenous substances—Cream of tartar—Gum, pectin, dextrin (?)—Gases, nitrogen, carbonic acid—Divers salts.

Seeds: Lignose—Fatty matters—Nitrogenous substances—Gum—Starch—Phosphates—Divers salts—Tannin.

B. LIQUID BODIES.

Water—Glucose—Levulose—Divers nitrogenous substances—Saccharose, dulcete—Cream of tartar—Tartrate of calcium—Tartaric, malic, and racemic acids—Halogen acids (traces)—Ammoniacal salts and organic derivatives—Phosphates, sulphates, nitrates—Potash, lime, magnesia.

C. GASEOUS BODIES.

Carbonic anhydride—Nitrogen—Hydrogen sulphide.

ELEMENTS OF WINE (RED WINE).

Water—Alcohols: ethylic, propylic, butylic (amyllic?), caproic, cenantilic, caprylic, pelargonic, capric.

Higher alcohols—Glycerine—Isobutyl—Mannite—Glucose—Levulose—Inosin—Gum—Pectic matters—Essential oils—Furfurol—Aldehyde—Acetal.

Ethers: acetic, propionic, butyric, valerianic, caproic, lauric, myristic, palmitic, stearic.

Acids: carbonic, acetic, propionic, butyric, caproic, cenantilic, caprylic, capric, lauric, myristic, tartaric, racemic, succinic, malic, tannic, sulphuric, nitric, phosphoric, silicic, chlorhydric, fluorhydric. These acids are either free or combined with the bases: potash, soda, lime, magnesia, alumina, iron oxide, manganese, ammonia, volatile bases of the pyridic series.

Albuminoids—Coloring matters.

selves contain. The addition of the latter is considered by many as an adulteration, because it changes the quantitative composition of the must, and consequently of the wine.

Who first made wine is not known. The history of its manufacture, like that of many other fermented beverages, extends back into the mists of ages; nothing, therefore, is known about its first use. Tradition and mythology give several accounts of its first appearance, but they are of a very contradictory nature.

Of one thing we may be sure, and that is that from the first, man has asked himself the question: Is wine a real benefit? A question that has not yet, perhaps, been answered to the satisfaction of some.

Even at the present day it is not possible to give a satisfactory, definite reply to this demand, unless we look at it from an economical standpoint, in which case there can be no doubt of its utility, as it is one of the principal sources of national wealth in every country where the grape can be grown.

We must therefore consider it from this point of view, otherwise its real utility to man might be contested.

It is said that wine incites man to anger, licentiousness, murder, and in general subjects him to a thousand depraving temptations.

"Il vino e il veleno piu terribile per la società. Ne i fulmine di Giove, nè la spada di Marte, nè i baci di Venere hanno fatto tante vittime quanto Bacco coi calici spumante."—Bizzozero.

Alcohol, the moment it enters the cells and nervous filaments, revives their functions and excites and stimulates their action; this state of exaltation passed, however, if more alcohol is imbibed by the cells and nerves a period of exhaustion supervenes. The presence of this foreign body in the organism, tainting the blood and diffusing its vapors through the substance of the brain, interferes with the chemical processes of the body, augments the resistance to the nervous movements, and engenders that particular kind of poisoning known under the name of intoxication.

It was owing to wine that Ham was cursed and became the servant of his brothers' servants. It was owing to wine that the ancient Persians, Lacedemonians, Romans—active, vigorous, and glorious by a thousand splendid victories, as long as they possessed the virtue of sobriety—declined and fell when—

*Della stoica incude
Spessa nel vin tempravasi
La rigida virtude.*

But that was the abuse not the use of wine.

Every one should know that wine, drunk in moderation or with temperance, favors and augments the secretion of the gastric juices and so aids digestion; it excites the imagination, awakens the memory, dispels care, restores the physical force, and renders the movements of the body active and vigorous.

A proof of this, if one is needed, is furnished by the fact cited by all writers on hygiene, that if in the war of 1870–71 the German army was able to sustain the fatigues of the campaign and sieges, always remaining in good health, it was because they were invading and conquering a wine-producing country.

Bacchus is the "Dio salvatore." Plutarch, in the life of Cæsar, mentions that the whole army of the General was once afflicted with a

disease which Cæsar cured by allowing all the soldiers to get solemnly drunk. From that day they all commenced to recover.

Certainly among the curative resources at the disposal of hygiene and medicine there is none more frequently used than wine. We always, as it were by instinct, say to a convalescent: "You should drink wine."

Hippocrates says: "Wine is a liquid marvelously adapted to man, well or ill, providing he take it at the proper time and in quantities suitable to his constitution."

Liebig, too, is of the same opinion, for he writes: "Wine is unsurpassed by any product, natural or artificial, as a restorer of the vital forces when they are exhausted; it animates and revives the saddened spirits, it serves as a corrective and antidote in all irregularities of the animal economy, which it preserves from the passing ills to which inorganic nature subjects it."

Wine considered from an alimentary point of view has its chief importance in the union of alcohol with an acid liquid; the acid moderates the too energetic action of the alcohol, especially its action on the nervous system.

The tannin and coloring matter, when present in due proportion, exercise a very favorable influence on the stomach by animating the energies of the digestive functions.

The aroma, the bouquet, the "sève" of a wine are also useful, as many facts tend to prove, among others, the fact that well-flavored substances in general have a favorable influence on nutrition.

Wine has a density nearly equal to that of water, and is absorbed into our system with much less rapidity than spirits; this fact is of great importance to the animal economy, because the effects of wine are thus felt for a longer time and without the danger accompanying the rapid effects of brandy.

Wine is absorbed by our digestive organs without any change but that of being mixed with the gastric juice. There is no need of the intervention of the digestive ferments to facilitate the absorption of the wine in its last office of nutrition. This explains its utility in certain diseases.

The complexity of the organic matters that enter into the composition of wine, which up to a certain point resembles that of the human body, explains its restorative action in the case of individuals weakened by anæmia or insufficient nourishment, etc.

Wine, then, is produced and drunk, and of all fermented beverages it is the most healthful, and the one that most harmonizes with our organism. If nature had gifted man, as it has all other animals, with a surer instinct in the choice of the food that was best suited to his constitution, certainly without any hesitation among the first substances he would have selected wine; however, having a less reliable instinct than he might have, he has allowed himself to be greatly influenced by tradition and imitation in the choice of his beverages.

I.

CLASSIFICATION.

Of the numerous classifications that have been made, and that might be made, of the various and diverse wines produced in the different wine-growing regions, that is to be preferred which, up to a certain point, can be considered as the most natural, by giving an immediate idea of the principal characters presented by a certain wine or category of wines.

Carpené very justly considers the classing of wines according to different dishes or repasts as misleading and hurtful to the trade; for, as he well remarks in one of his articles, if this classification should be carried out we should have tripe wine, cheese wine, macaroni wine, etc. As every one knows, the order of wines and dishes through the repast is influenced by fashion and caprice. To-morrow, perhaps fashion will oblige us to imitate northern nations and Americans in our "cuisine," and then we will be obliged to drink champagne through the whole dinner; thus champagne must be successively known as an oyster wine, a soup wine, a roast wine, and heaven knows what else.

Not long since I was at a banquet, and by chance was placed next to a certain high functionary who was to commence the series of toasts. On the appearance of the roast our high functionary prepared himself. "But how is this," he exclaimed to a neighbor, "do they not give us champagne now?" "They serve the 'roast wine' now," replied the other. "Roast wine," cried the surprised high functionary, "but at court they serve champagne with the roast." Champagne was afterwards brought, and then the eminent personage was able to get up and make his toast, a very appropriate and happy one. I cannot say what influence the "roast wine" may have had on it.

This classifying by dishes is certainly all wrong, but if we should ask ourselves the question, as an amateur does in the wine taster's *vade mecum*, "*La vite ed il vino*," "When should one drink wine?" the answer most certainly would be, "Whilst eating." Without a good selection of wines the most perfect bill of fare loses all its value.

High-class red wines should not be drunk before they have been eight or ten years in bottle. Before that they may be rough, and not particularly pleasant to the taste. Very fine white wines, too, should be well aged, otherwise the sugar, of which they contain a certain amount, will not have been all transformed into alcohol, and lessens their strength and bouquet.

A natural, primary, and main division of the various wines may be made with reference to their color, viz.:

WHITE AND RED WINES.

It should be stated here that this general division rests not only on the color that the wine may have, or on the presence or absence of œnocy-anin in its composition, but on other characteristics in which a white wine differs greatly from a red.

This division is of no little hygienic importance, wines of different color having as distinct effects on our constitution as wines of different age, alcoholicity, or acidity.

White wines, as is well known, are obtained from white grapes, or from red grapes which, instead of being crushed and fermented in a mass, are pressed, and the must fermented separately; that is, not in contact with the pomace or solid parts of the grapes.

I call attention to the fact that white wine can be made from red grapes, because wines so made have exactly the same action on our system as have white wines made from white grapes.

Certainly the following from Guyot is very true:

Wine which has been fermented in contact with the stems, skins, and seeds of the grapes is very different from that which has been fermented separately. The latter wine is white, the other red, and the antithesis, though expressed here simply by the opposition of color, does not consist in the least in this difference of color, which is only an accident. The real difference consists in the special and often opposite hygienic qualities of these two kinds of wine. Nowadays they make red wines which have all the hygienic properties of white wines, and it is possible to produce white wines which would have all the hygienic properties of red. All that is necessary to obtain this last result is to ferment the must of white grapes with the skins, seeds, and stems, in the same way as red wine is treated; in this way all the effects are obtained of a rapid decomposition and solution by maceration of the principles and products which are not found in the juice of the grape. * * *

I insist on the true distinction of wines obtained by the fermentation of the juice of the grape completely isolated from its accessories, and those made by fermentation of the juice, together with all, or at least part of the rest of the grape—a distinction quite independent of the color. Nothing is more alien or of less importance to the quality of a wine than its color. It may be a sign—an indication—but it is never a quality of itself. By the majority of consumers color is looked upon as a guarantee of the purity, quality, and strength of the wine. It is on account of this considering color as a sign of quality that unscrupulous dealers make use of it to commit innumerable frauds.

White wines are in general diffusible stimulants of the nervous system; if they are light they act rapidly on the physical organization, of which they intensify all the functions. It seems that they escape just as quickly through the skin and mucous membranes, and, above all, with the urine; their action, then, is of short duration.

Unlike white wines, red wines are tonic and persistent stimulants of the nerves, the muscles, and the digestive organs. Their organic action being slower is more prolonged; they do not unduly excite the perspiration nor the excretions, and their general action is astringent, persistent, and concentrated.

Moreover, the common opinion, founded on daily experience, leaves no doubt of the real difference, in their sensual and organic effects, between white wines and red.

Of equal importance are the following words of Dr. Gauber:

If one should divide the grapes gathered from a vineyard of the "Graves" of the Gironde into two parts, and of one make white wine and of the other red, and then, at the end of four years, make a careful tasting of these two wines which have been carefully treated during these four years, what will be the result? Made from a raw material apparently identical, will they be equally developed and equally mature? The white wine will have aged the most.

Will they produce the same effect, the same degree of stimulation, on our organs? Let us collect the sensations produced by one and the other in the order in which they are produced.

1. A glass of white wine, well made and dry, the moment it enters the mouth develops a bright and penetrating aroma, and leaves, in passing, an impression, agreeable it is true, but fugitive and almost hot. Hardly has it reached the surface of the stomach when it causes a feeling of warmth which, in less than ten minutes in the case of certain healthy but impressionable constitutions, becomes very intense. Sometimes the action, by sympathetic radiation, is reflected from the stomach to the head with the promptitude of the electric fluid. Generally, after an hour or less, a sensation is felt as of a pressure either on the two temples or around the whole head; the hand is instinctively passed over the forehead as though to free it from some load. Sometimes a feeling of painful fullness of the brain accompanies these effects. The irritation is communicated from the gastric and nervous centers to the whole body. It shows itself by increased warmth, often irregularly distributed, of the body (with irritable people the palm of the hand often becomes unpleasantly hot and dry); by a need of movement, of displacement rather than of exercise (with people of the disposition mentioned above this need is shown by an internal agitation, by slight muscular tremblings accompanied by shooting pains that strike, with the rapidity of lightning, different parts of the body).

At the end of two or three hours, more or less, according to the temperament and susceptibility of the individual, the irritation passes away and the taster finds himself in the same condition as before, with or without a certain feeling of lassitude or sadness.

2. If the white wine is replaced by a red wine of the same vintage, and taken at a proper temperature, it will leave in passing a distinct impression on the two senses of smell and taste of a soft aroma; its fluidity in the mouth is less, and though it feels more material, so to speak, it leaves a less intense feeling of dry heat. Its contact with the stomach produces a softer and more gradual impression.

The organ is still warmed, but in a more vital manner, as it were. As to the sympathetic propagation of the stimulating action towards the head, it still takes place, but without the nervous phenomena of pressure and pain; the brain is gently excited. Its extension to the organs of the senses, if it takes place, is no longer betrayed by the need of displacement and agitation, but by a strengthened desire for exercise, which is very different. The duration of the stimulation is more prolonged and ceases insensibly, so that the most attentive observation cannot detect the exact time at which it ends.

Here is, we believe, the sufficient explanation of the difference of effect observed between white wine and red wine—the first (white wines of Graves), produced by fermentation of the must separate from the pomace, contains about 4 to 6 per cent of extractive matter and tannin; the second, 8 to 11 and 12 per cent of the same matters.

It is to this difference in the proportions of the rough and astringent matters of the wines that we attribute their different effects.

In the red wines the pressure of the alcohol on the nervous system of the stomach is softened by the interposition of more abundant tonic and extractive matters; the effect is thus slow and successive. In white wines it is almost immediate, and therefore stronger and less lasting.

Each of these large groups into which the various wines may be divided is susceptible of three subdivisions, which are sufficiently natural, as they give immediately some idea of the quality of a wine which enters into any one of them.

These three subdivisions are the following:

1. Table wines.
2. Dessert or alcoholic wines.
3. Blending or cutting wines.

1. Table Wines.

These wines may be of higher or lower quality, according to the locality in which they are produced, and to the care that is taken in their making and after-treatment; they must not be sweet nor too alcoholic; not aromatic nor possessed of too pronounced a bouquet, though those of higher quality may be slightly aromatic; they must not be too rich in color, too astringent, nor too acid; they ought not to be harsh nor of too heavy body, that is, too rich in extractive matter.* A wine of this group should be clean tasting, and should form an harmonious whole, agreeable to the palate and stomach, so that it can be drunk with pleasure. These wines are healthful, because they favor digestion, and a certain quantity of them can be taken without producing intoxication or other physical disturbance.

Concisely the characters of a typical table wine may be described as follows:

Light but not poor in alcohol; not the slightest tendency to sweetness; pleasing but light and delicate aroma and flavor; nothing excessive, but complete harmony of all parts. A full and generous homogeneity; limpidity; constancy of type. Though in the matter of dishes variety

* "In the middle of the seventeenth century England consumed the light wines of France, and, as Gladstone says, they laughed and sang in those days in the British realm. The wars between France and Great Britain breaking out, the French wines were prohibited and in their stead the heavy wines of Spain and Portugal were imported; they still drank as much, continues Gladstone, but they sang no longer; to laughter succeeded quarrels and base deeds."—R. Dejermon.

is both useful and pleasing, it is different with wine where constant uniformity of type is necessary.

As in this class of wines are comprehended all qualities from the finest to the most ordinary, it is easily seen that other distinctions can and must be made, in order that the wines, for example, of Barolo or Chianti, shall be distinguished from wines produced in some less favorable locality.

The various wines that enter into the category under discussion can be naturally and conveniently classified as follows:

A.—Superfine, or high-class wines; the "Grands Vins" of the French.

B.—Fine wines.

C.—Fine common wines.

D.—Common wines.

E.—Low-grade wines.

This classification, as Polacci would say, has nothing imaginative or strained about it, as it simply represents the wines that we really have and of which we make use in commerce.

I will now try to give, not a definition, because the name of each class is of itself a definition, and should give a fair conception of the distinction to be made between the several classes, but an idea regarding the characteristics which have served in grading the wines which we actually produce in Italy.

A. *High-class Wines.*—These are wines which are produced in certain spots, or rather which are obtained from certain varieties of grapes, grown in especially favorable conditions of climate, and more particularly of soil, compared with those of the circumjacent vineyards; wines which also, it may be said, are the product of an almost infinite series of careful treatments, beginning in the vineyard and continued through the vintage and during the whole time, which is certainly not brief, of their conservation; wines, in short, which unite in themselves all the characteristics and qualities which should be found in a fine wine, united with the greatest delicacy and fragrance of aroma and freshness on the palate. An Italian wine which belongs to this class is the Chianti di Brolio. Of the French wines of Bordeaux, or more precisely of the Médoc, there are Chateau-Lafite and Chateau-la-Tour, the latter of which is distinguished from the former by a slightly heavier body and a more pronounced flavor and aroma.

B. *Fine Wines.*—These are wines which approach very nearly to the preceding class, but are, nevertheless, somewhat inferior to them, either in delicacy of aroma or in some other quality; very often they lack or are deficient in the freshness which distinguishes the first class. These wines are very often the product of grapes grown in the neighborhood of the vineyards producing the first-class wines which have given renown to the locality, but they may be made from grapes grown in other localities. To this second class belong, for example, those wines of Chianti which resemble greatly in character the Chianti di Brolio, but do not equal it. In the same way among the French wines of the Médoc, Saint-Julien and Saint-Estephe approach but are not equal to Chateau-Lafite.

It may very possibly be that some of the wines of Chianti exhibit qualities which place them, so to speak, in rank with the Chianti di Brolio; then from the second they must be promoted to the first class, as is the case with Chateau-la-Tour, which, though somewhat different, is

deemed worthy to stand in rank with Chateau-Lafite and the other two, Chateaux-Margaux and Chateau-Haut-Brion, which together form the four "grands vins," high-class wines of the Gironde.

C. *Fine Common Wines.*—In this third category are placed those wines which are intermediate between the fine wines and the common wines. This class of wines can be produced in large quantities in Italy, as there are numerous regions both in the hills and plains which present the requisite favorable conditions.

The wines in question generally lack or are deficient in delicacy; with time, and sometimes, too, with a little artificial aid, they acquire some aroma which is not, however, always very delicate. These wines form, or ought to form, the bulk of our export trade; but if we wish to do a steady trade we must set ourselves diligently to make and properly handle these wines. To do this the producers must abandon the idea of making high-class wines, and confine themselves to wines of this kind.

The wines of this class produced in Italy, especially by those who have recourse to artificial additions, or who do not well understand the processes of wine making, present a certain dryness to the taste which is not exactly pleasing.

The taster will pronounce them sound wines without any particular defect, but he is not quite satisfied. This may be owing to an artificial aroma, or to the addition of alcohol; it may be caused by heating, or by a too violent fermentation, to the grapes having been picked at the wrong time, or to an injudicious correction of the must, or—but as this is not the place to try to account for it it will suffice to state the fact.

Such artificial aids, then, as the addition of drugs, the drying of the grapes, heating, etc., should be abandoned, and instead a judicious choice of vines, or a blending of grapes or wines substituted; in this way it will be possible to deliver to the trade wines which have a sufficient freshness of taste and frankness of flavor; they will be to a certain extent smooth and delicate, and will possess more or less of that fruity taste so much liked by consumers.

D. *Common Wines, or Wines of the Plains.*—This is a class of wines of which it is not very easy to give a definition or to point out its exact limits in order that it may not be confused with the preceding or comprehended in the following class. To prove that this is a real difficulty it will suffice to quote the eminent agriculturist, F. Re: "I have sometimes drunk wines made from grapes grown in a naturally clayey soil, subjected to irrigation, which were very good, and some even which seemed to be of superior excellence."

I should therefore state that all wines grown on level ground cannot be classed as common wines; even on the plains, when the climate and especially when the soil and the variety of grapes are particularly favorable, choice wines may be produced which are worthy to figure in the preceding class.

The division or class of common wines comprises all those wines consumed in the largest quantities, and which, because of the ease and economy with which they are produced, can be sold at a low price, so that they find steady consumers among the working classes, who consume, after all, the greater part of the product of the vineyards.

These wines are most commonly the product of grapes grown on the plain, either in vineyards or associated with other crops; this does not

exclude the possibility of producing such wines from grapes grown on hills, and especially when the exposure is unfavorable, or when the nature of the soil is unsuitable, or when, on account of the ignorance of the grape grower, who prefers quantity to quality, he plants by preference those varieties which give an abundant crop of very inferior grapes. Wines of this class have very poor keeping qualities, lasting two years at the most, and in general in aging, with the exception of those which are very rough and astringent, deteriorate instead of improving.

These wines are sufficiently alcoholic, but owe their conservation less to their alcohol than to their acids, among which, with many of them, must be included carbonic acid. To their acids, also, they owe most of their hygienic value, which is to aid in the digestion of the food consumed by the laborers who drink them—food which is naturally difficult of digestion, and rendered more so by its ill preparation.

These wines are more nutritious than are those of the preceding class, containing, as they do, larger quantities of albuminoids, in which grapes from the plains usually abound. The reason of the greater abundance of nitrogenous matters in inferior grapes is the natural fertility of the soil on which they have been grown, or the fact that this ground has been manured with nitrogenous fertilizers, with the idea of increasing the bearing of grapes or the production of wood and foliage.

These wines are naturally very variable, differing greatly according to the conditions of soil, climate, and aspect under which they have been produced. To further increase this variability man does his best, seeming to take a delight in practicing methods of wine making that are apparently ingeniously calculated to spoil the wine.

A wine of this class should be of easy digestion, and easily consumed in moderate quantities, without affecting the head or the stomach. It should be smooth, clean tasting, well fermented, with a certain amount of flavor and acid, and should show none of the effects of secondary fermentations to which these wines are so subject; finally, it should possess a good, bright, but not deep, color.

I have said a wine of this class "should be" all this, because only too often, on account of careless making or improper handling, they are anything but healthful; they are, on the contrary, heavy and indigestible, causing, even when used sparingly, disturbances of the head and stomach; they are heavy-bodied wines, and so thick as to be appropriately called by some people, "*vini carnosi*;" their defects are usually due to the vessels in which they have been made and kept, to bad fermentation, or to the addition of substances which have been put in with the intention of preserving the wine, or of masking its defects. They are often costive and overcharged with tannin and coloring matter, recalling, the moment they touch the palate, the flavor of ink. Their color is generally unstable and dull.

E. *Low-grade Wines*.—These wines occupy the lowest grade on the oenological scale, that is to say, among natural wines. In drinking one of these wines one asks himself if it is really a wine or not rather a piquette or mixture of water and wine, with superabundance of the former. Except color, these wines are deficient in all the elements proper to wine. They must be consumed promptly during the winter, or they cease to be wine. Generally, to render them drinkable at all, they must be left for some time on their pomace, or on that of better

wines; or else they can be cut with other wines, or be given the treatment usual in Tuscany, known as the "*governo*."

When these wines are sound they do very well for cutting with other wines, thus making a blend which can be classed with the common wines, or even sometimes with the third class, or fine common wines.

2. *Dessert or Alcoholic Wines.*

This class includes all those wines which the French call "*vins de luxe*," and therefore champagnes and other sparkling wines, which, however, are, unlike most of this class, of relatively low alcoholic strength.

Sparkling wines are placed here because, as a rule, they are of high cost, and therefore "*vins de luxe*." However, we are now producing natural wines which are afterwards artificially made sparkling, at a much less cost; and this industry is assuming such proportions that it cannot well be overlooked.

Apparatus of different kinds for the production of sparkling wines have been known and used for a long time in France, Germany, and Austria.

Latterly the practice of artificially making champagne from natural dry wines has been extensively followed in Italy; this is due to the invention of the apparatus of Carpené, which possesses above all previous systems the advantages of simplicity and cheapness. This system has rendered possible the production of good sparkling wines at a moderate cost.

With this explanation regarding champagne, and the reason for placing it in this class, I pass to those wines more properly belonging to it, and here give Polacci's definition of "*vini di lusso*."

These wines are nearly always alcoholic, more or less aromatic, and are drunk, as a rule, after dinner, on which account they are called by foreigners dessert or after-dinner wines. They are, so to speak, concentrated, and are sipped from small glasses like cordials, for which reason the French know them as "*vins de liqueurs*." We know them as "*vini di lusso*," because they are certainly not necessary beverages, and from their high cost are usually reserved for the tables of the rich.

The many and diverse wines of this class can be divided, or rather united, under the following heads: Sweet Wines; Alcoholic Wines; Sparkling Wines.

In this class are wines so well known, and of such special character, that it is difficult to class them together, and each is usually spoken of by itself as almost forming a class apart; as with the wines in the first class, the "*grand vins*," their qualities and peculiarities are so well known that their names alone is a sufficient description; such wines are Marsala, Lacrima Christi, Vernaccia di Sardegna, Malvasia di Lipari, etc.

3. *Cutting Wines.*

These wines are rich in alcohol, coloring matter, and body, but often deficient in acid; they cannot be drunk alone, and the only reason for producing them is that there are localities which produce wines which are thin, poor in color, weak in alcohol, and generally lacking in those qualities which wines of this class have in excess. A mixture of these two kinds of wine, each of which alone is of little value, produce a wine which is sustaining and nutritious, and especially suited to the needs

and means of the laboring classes. The better kinds of these wines may even be blended to form a wine which might be placed among the fine common wines, or third class, and not unworthy of the honor of bottling.

At the present day the French wine merchants use large quantities of cutting wines imported from Italy, Spain, and Dalmatia. Before the invasion of the phylloxera, their blends were made with the wines of Roussillon, Languedoc, Pyrénées-orientales, Aude, Gard, Tarn, etc., all wines rich in coloring matter and alcohol, solid and heavy-bodied, and at the same time smooth, delicate, and with a characteristic and persistent aroma which is very pleasing.

Here is, for example, a blend or mixture of different wines formerly much in vogue in France:

Wine of Roussillon.....	30 litres.
Wine of Narbonne	60 litres.
Wine of Cher	30 litres.
Wine of Poitou, blanc	60 litres.
Wine of Bourgogne	30 litres.
Wine of Pique-poule, at 15 per cent	15 litres.
Total	225 litres.

A French writer thus justly expresses himself: "After the invasion of France by the phylloxera, commerce drew contributions from all wine-producing regions; science was also brought to its aid; an immense productive movement commenced, not only in France, but in foreign countries, and now wines flow in from all parts, from Spain, Italy, Austria, Greece, the Crimea, and even from Australia; wines of all kinds, which, passing through the skillful hands of our merchants, there receive the official seal, the inimitable touch, which serves them for passport to the wine connoisseurs of the entire world." Further on we read: "In this combination each region plays its role, and helps towards the final result that we desire to obtain; from Italy the blend obtains strength, extract, body; Spain supplies softness and fruitiness; our own wines add piquancy, and economize on the price of production."

In whatever way the cutting is done, and whatever the combination adopted, the following may be taken in general as the composition of most blends:

One third wine of Italy;

One third wine of Spain;

One third "petits vins" of France, or wine made from dried grapes.

Cutting wines are then of no little importance to wine growing in France, or rather to the French wine trade; why then, should they not be as important to ours, especially now that the two are in competition?

Let us then produce cutting wines, but let them be well made and sound. By such wines the Italian wine trade will be benefited as much as is the French now.

II.

TASTING.

The word "tasting" is not used with its ordinary signification when referring to wine, but means, in that case, not only the testing of its flavor by means of the gustatory organs, but also a careful examination of the wine in other ways; of its appearance, of its bouquet, as well as of its effect upon the palate; all of which is necessary before a final judgment can be passed on its character, its qualities, and its defects.

Wine tasting is a somewhat difficult art, which cannot be acquired without long practice, and then only by one who possesses a clear eye and very delicate organs of taste and smell. When the last two organs have the requisite sensibility, practice alone is necessary to give them the skill needed in tasting a wine.

It is by frequent tasting, by making comparisons, by the examination of good types, that this delicacy and sensibility of the palate is developed which enables it to detect and appreciate the faintest aroma, flavor, or bouquet, as well as the slightest defect.

Practically the tasting of a wine is, up to a certain point, of more importance than its chemical analysis. Analysis shows us the principal components of the wine and the proportions in which they are combined; tasting tells us whether these components are in proper proportions to form an harmonious whole, or are, some of them, in excessive or deficient amounts; whether the wine has "sève," bouquet, aroma; whether it is mature or not; whether it should be racked or bottled; what its defects are, its keeping qualities, etc.

Any one can say whether a wine pleases him or not, but only the experienced taster can pronounce with any degree of certainty on the real properties and character of a wine. A good wine may be pleasing to-day and not so to-morrow, on account of slight exterior influences which are dangerous to its stability but may be only transitory in their effects, and the wine may recover and be as good as ever.

In order to make useful deductions it is of the highest importance, in fact absolutely necessary, to be able to appreciate and reflect on the sensations experienced in the tasting. It is not every one who can appreciate the true import of what they perceive, but only those who have trained themselves by long practice.

The experienced taster, when called upon to give his opinion, looks at and attentively examines the wine. He then agitates it by shaking the glass, and, when necessary, places his hand round the glass in such a way as to warm the wine, thus favoring the volatilization of those matters which affect the olfactory organs; he then tastes it.

Sometimes the simple agitation of the wine by twirling the glass is not sufficient, especially when the sparkling and bouquet are to be particularly noticed. In this case the wine must be more thoroughly shaken, which is done by placing the palm of the left hand over the mouth of the glass, and then striking the bottom of it forcibly against

the knee. This causes the wine to give off its odors, and in the case of sparkling wines its carbonic acid, more freely. The method, writes Ottavi, is not very polished or elegant, but accomplishes the purpose very well.

As can be easily seen the wine taster should preserve his senses, that is, those of smell and taste, with their utmost sensibility; this is only done by avoiding excesses of all kinds, for these in course of time are bound to diminish that sensibility, or to destroy it completely. Thus he must abstain from all highly alcoholic beverages, from strongly salted or flavored dishes, from tobacco in any form, and in general from everything that acts too energetically on the organs of the above-mentioned senses.

Physical indisposition, more especially affections of the nasal organs, the mouth, or throat, diminish or destroy all sensibility of the senses of taste and smell.

"Wine should not be tasted fasting, or it will taste weak and insipid; nor after drinking wine; nor with a full stomach. Moreover, the taster should not have eaten anything sour, salt, or bitter, nor anything which might change his taste; but he should have eaten a little, but not yet have digested it."—Carlo Stefano.

The taster should not attempt to give his opinion of more than a certain number of wines at a time, as after having tasted a certain number the senses become temporarily much impaired and incapable of nice discrimination; nor should he judge of a wine after an abundant repast, as the various flavors of highly seasoned or sweetened foods have a great influence on the palate, and prevent it from judging a wine critically.

It is a well-known fact that after eating sweet fruit a wine seems to be rougher and harsher than it really is, whilst cheese, nuts, artichokes, etc., make it appear smoother and more delicate.

With piquant cheese, like Parmigiano and Roquefort more especially, which Grimod de la Reynière has called "the tippler's biscuit," all wines seem good, or at least much better than they really are. It is also true that strong and badly tasting wines when drunk undiluted destroy the sensibility of the palate; people habituated to these wines end by being unable to find any taste in the fine wines of delicate flavor which are the delight of the connoisseur.

Tasters who are accustomed only to high-class wines, when they taste ordinary or low-class wines are apt to underrate them, if they do not reject them as altogether valueless, though they may be sound and clean tasting.

On the other hand, tasters accustomed to ordinary wines almost always deem the prices paid for high-class wines excessive.

This suggests the importance of habit as a factor in the modifications which the taste may undergo. It may easily happen that the prolonged use of a substance may render the sense of taste obtuse, and that the tongue may become "saturated," as Brillat-Savarin says in one of his happy aphorisms. Thus, when the palate has become habituated to a taste, that which at first was intolerable becomes often pleasing and even necessary. Generally, however, habit educates the sense of taste and renders it acute.

Sometimes a taster is called upon to give an opinion as to the character,

the good or bad qualities of a wine of a certain locality or of some particular producer or vineyard; in this case, even though he may be well acquainted with the kind of wine, to be able to give his decision with more confidence, he will carefully provide himself with a wine of the same type as that which he is called upon to judge; he can thus receive material aid by making a comparison.

Naturally, a taster who is used to the wines of a certain locality or country will be more easily able to detect the slightest differences between the wines of that locality, especially those differences in fine wines which distinguish wines produced by different vineyards even in the same locality, and when planted with the same varieties of grapes.

A taster should be very cautious in giving an opinion of a young wine, or of one whose origin is unknown, and of pronouncing on its intrinsic worth; the youth of the wine will often mask defects, which, later, become apparent.

When it is found necessary to taste several wines in succession, it is a good practice to eat a little dry bread between each wine, or to rinse out the mouth with a little fresh water, to neutralize the palate, so to speak.

It is always good to rinse out the mouth with fresh water before commencing to taste.

Before commencing the tasting, or rather the final tasting—that on which is based the concluding judgment—the wines should be sorted; for example, if the wines are of the same kind, but of different ages, it is best to begin by tasting the weakest, thinnest, or greenest wines, reserving the maturer wines and those which are more aromatic, smooth, or alcoholic for the last.

The same is true when there are many and diverse wines, as at an exposition. In this case the tasting proper should be preceded by an arranging of the various wines, a thing which is not done at all, or badly done as a rule, much to the detriment of the exhibitors. This selection should be based not on the labels on the bottles, or on the statements of the exhibitors, but on a preliminary tasting; in this way those who are to judge the wines will not be presented successively with different types of wine, with wines of different qualities and ages together, and, as is unfortunately the case, sometimes with defective or bad ones.

There are tasters who are ready at any time to pass judgment on a wine; they will even taste directly after smoking. Their opinion, to say the least, is of little value.

A good taster is not always in condition to exercise his art, and for that reason must sometimes refuse to make a tasting when he does not feel in a state to judge critically.

Here I may appropriately remark that the wine dealer often relies too much on the lack of delicacy of taste on the part of the consumer. He should remember that among his customers there is occasionally a connoisseur, or at least a fairly good taster, who can appreciate the wine at its true worth, and whose opinion is followed by the majority of his other customers.

A little advice is needed also by those who are called upon to judge competing wines at exhibitions or elsewhere.

Without exaggeration, I may say that there is scarcely a person in

Italy, connected in any way with wine, who has not been called upon to act as judge in competitions of this kind. I need not say how much harm this has done our national wine industry; I will simply, with Polacci, express the desire that we might see some day in Italy "una vera magistratura enologica," a body of competent men to look after these affairs.

We will now return to our tasting. The forenoon is the time best adapted for wine tasting; the wines are of the proper temperature, a temperature which varies for red wines between 54° and 60° F., and for white wines between 50° and 54° F.; the taster is in good condition, and consequently the tasting may begin.

There should be no bad odors present, and the place in which the tasting* takes place should be well lighted with diffused light, not obscurely through a small and narrow window, nor too brightly by the direct rays of the sun; it should be remote from all noise, where the taster can remain quite undisturbed.

It is a fact admitted by physiologists that the senses exercise a mutual influence on one another, so that anything that excites one sense has the effect of increasing the acuteness of the other.

This reciprocal influence seems to be confirmed by the recent researches of Dr. Albertini, who says that the defect of color-blindness is accompanied by a corresponding deafness for certain sounds. Thus, those who cannot perceive red cannot distinguish *sol*, while those who are color-blind for green are unable to recognize *re*; to this lack of oral perception is joined the inability to reproduce these notes with the vocal organs.

"The taster," writes Franck, "should be deaf and dumb; deaf, in order that his judgment of the various qualities and defects revealed to him by his senses may be undisturbed; dumb, in order to prevent the expression of a hasty or insufficiently considered opinion."

Every one has noticed how a gourmand will close his eyes in order better to appreciate the delicate flavors of a substance, thus bringing his mind to a proper state of attention by the absence of all other excitement. This will explain the exclamation of the court parasite, who, disgusted with his too turbulent table companions, cried: "Hush! You do not understand what you are eating."

* Here the question asked in "Conseils d'un amateur:" How should wine be drunk? might appropriately be answered. In our opinion, in order that the benefits of drinking it may be enjoyed in their fullness, the first thing necessary is that the wine shall be presented in the manner most pleasing to the eye and to the palate, for this impression on the senses has a most important influence on the rest of our body. With this end in view we should be scrupulously careful to have the wine at the exact degree of temperature that the nature and quality of the wine demand for the proper development of its flavor and bouquet, and then to make a judicious choice of the kind of glasses in which it is to be served. For Bordeaux, Burgundy, Chianti, Barolo, etc., the proper temperature is that of the dining-room, where they should be placed for some hours before they are to be consumed. White wines, sweet wines, etc., must be of the temperature of the cellar, that is, supposing the cellar is very cool, otherwise it is necessary to cool the wine, either by placing the bottles on ice, or by placing them in water containing a few lumps of ice, but never in the ice, for that completely destroys the character of the wine. Champagne is the only wine that may be put in ice, but even in this case discretion should be used, and if the wine is put in ice for three or four hours before being used it will be found sufficient, and the wine should then be served directly from the bottle. It is then a great mistake to place wine in ice or in freezing mixtures, for a wine so treated destroys the appetite and is injurious to the health.

The practice of pouring champagne into decanters containing ice cannot be too strongly deprecated. In the first place, it is not wine you drink, but a mixture of champagne and water; and secondly, the temperature is never right, as it cannot be regulated.

Let us add that ice should never be put *into* wine, for it destroys the bouquet and flavor of the wine, and if it gives a momentary pleasure to the palate by a sense of coolness, it also renders the digestion slow and laborious.

The taster should be provided with a porcelain cup, or with the Bordelais silver cup, which, however, may be made smboth, and if so, the bottom should be a little raised; this cup is especially applicable to young or blending wines, as it is the best for observing the tint and intensity of color and the degree of limpidity.

There are two kinds of Bordelais cups; one preferred by the sellers, and the other by the buyers.

Naturally the seller tries to show off his wine to the best advantage; for this purpose he prefers a cup with a raised bottom, bright, shining hollows in the sides, and a large rim, on which the rays of light have a pleasing effect.

The high rim and the yellowish tint that the maker gives to the silver of the cup concur to improve the appearance of the wine. The buyer's cup, on the contrary, is of silver of its natural color, and without the exaggerated rim, and without anything that might modify the appearance of the product to be examined.

In Bordeaux they prefer a cup almost without border, a kind of plain saucer, having in the center a slight convexity. In this cup the wine appears exactly as it is, without the slightest artificial alteration.

Lately the buyers of the Gironde have begun to use the twin cup—that is, two cups joined together with a hinge—by means of which it is possible to have two wines, which it is desired to compare, in almost the same conditions with regard to light.

Besides the Bordelais cup he should have at his disposal glasses of various forms, but all thin and homogeneous. Some should be chalice-shaped, but not too long; some of the shape known as "Bordelais," some cognac glasses, narrow at the mouth and widening below, that is, truncate egg-shaped. By means of the latter, the bouquet, fragrance, and odors generally can be best perceived, especially when their disengagement is aided by shaking.

Conical glasses, on account of their form, serve very well to judge of the color of a wine, as according to the height in the glass where the wine is examined, there will be a greater or less thickness for the rays of light to traverse. Between the two extremes the differences of tint (the gamut of color going from rose to red in the case of red wines, and from white to golden in the case of white wines) is very interesting, and may sometimes give very useful hints.

The different aspects under which a wine can be considered are so numerous, there is such an almost infinite number of possible differences in the various qualities and defects that have to be considered, that even the most expert taster would find himself in great perplexity without a proper and systematic arrangement of his sensations. To avoid this perplexity he proceeds as follows:

He takes a glass containing a small quantity of the wine; raises it to a level with his eyes, examining it carefully first at arm's length, and afterwards more closely; raises and lowers the glass in order to view the wine from above and from below. By inclining the glass and viewing it in different positions, by giving the wine a rotary motion, making it rise up the sides of the glass, he is assisted in his observations. In this way the taster learns all that can be discerned by the organ of sight, namely: the color or colors, the degree of limpidity, the disengagement of bubbles of gas, and the degree of persistence with which they cling to the sides of the glass.

Its appearance is, to a certain point, a sign of the condition of the

wine; from it the taster receives his first impressions and begins to form his opinion; this opinion is as yet, however, very relative, and rests only on probabilities, as a good wine may possibly wear the aspect of a bad one.

"Limpidity and vivid color are favorable signs," writes Guyot, "but they do not constitute high quality, though the contrary appearances are real defects."

Thus, though the eye may be pleased, the nose and palate may not be.

The experienced taster will be able to tell, to a certain extent, whether the color is natural and homogeneous, and so to a certain extent whether it is artificial; in this latter case he will be able to make a probable guess at the nature, vegetable or mineral, of the substances used to give color to, or to enhance the color of, the wine.

The estimation of the color of wine is very important, especially with cutting wines which are to be mixed with others to obtain the type demanded by customers.

The eye having fulfilled its office, it is the turn of the olfactory organs.

The sense of smell resides in the ample nasal cavities, and more especially in the pituitary, the mucous membrane which lines them. Odors, or better, infinitesimal particles of substance, reach this membrane by means of the external organs of the olfactory apparatus, that is, by the nostrils; they may also enter by the internal nostrils, the two openings which put the nasal cavities in communication with the larynx.

Physiologists admit that the sense of smell is not provoked only during inspiration but also during expiration, though in the latter case much more weakly. Thus, Franck tells us that it is during expiration that we analyze the perfumes of wines.

Besides the expiratory movements that we execute, sometimes quickly and intermittently, sometimes slowly, in order to place fresh portions of air in contact with the mucous membrane, the cavities formed by the folds of the mucous membrane are of great aid in the perception of odors, as the air laden with odorous particles accumulates in them, and thus prolongs the impression. The mucous membrane may be more or less sensitive according to its relative state of dryness or humidity, which, as I have shown, are much affected by colds in the head. When too dry the cellules are almost indurated, and when too moist they are separated from the air by a watery layer which prevents their regular action.

As may be supposed from the foregoing, the sense of smell will receive two impressions, or rather, will receive impressions at two different times, the first before the wine is tasted, and the second when the tongue and palate have almost finished their action; that is, when the taster commences to swallow the wine.

The sensations received the second time are various and very different from those received at first.

The first sensations are those caused by the readily volatile substances that the wine contains, and which are given off at the ordinary temperature of the wine, and without other assistance than the shaking and motion given to it by the hand of the taster.

The second series, which is perceived during or after swallowing the wine, is caused by the substances which are volatilized by the increased temperature due to the heat of the mouth and to the wine being well

"subdivided" by the tongue, and finally to the action of the juices secreted by the various parts of the mouth.

The taster having thoroughly examined the appearance of the wine, lifts the glass to a convenient distance and inhales the odors which are given off, and which fill the upper part of the glass, sometimes shaking or striking the glass to aid their giving off.

A wine may give off various odors, good or bad. I will treat of both of these when I come to describe the qualities good and bad which a wine may present.

Before proceeding further with the tasting it will be interesting to repeat the observations of Guyot, and of Brillat-Savarin, the "modern epicure," regarding the colors and aromas of wines.

"The aroma, like the color," writes Guyot, "is a favorable or an unfavorable, an agreeable or a disagreeable sign; but wine is above all an alimentary beverage; it is well that sight and smell should be satisfied, but it would be puerile and ridiculous to give undue importance to the satisfaction of these two senses, and to found the pretensions of a wine to superiority exclusively on its pleasing effect on one or both of them."

"I make this remark expressly because there are many hosts who have a troublesome habit of insisting that their guests shall continually inhale the odors given off by their wine, and especially insist on their smelling their empty glasses during a great part of the dinner, at the risk of making them die of thirst.*"

"The connoisseur, like the taster, knows perfectly well the importance of the color and bouquet of a wine, but he knows also that their appreciation should be immediately followed by the introduction of the liquid into the anterior portion of the mouth."

"The color and the bouquet are two introductory notes of a gastronomic theme. Alone they have but a relative value, and give but a partial impression of the whole theme."

Brillat-Savarin, who is an authority in matters of taste, writes, in his "Physiologie du Goût:"

"For my part I am not only persuaded that without the sense of smell there is no complete tasting, but I am tempted to believe that taste and smell constitute but one sense, of which the mouth is the laboratory and the nose the chimney; or to speak more literally, of which the former serves to taste the tangible parts and the latter the gaseous."

Thus, for example, when we eat a peach, the first thing that strikes us is its perfume; when we place it in the mouth we experience a sensation of coolness and acidity which invites us to continue; but it is only when the mouthful is swallowed, when it passes beneath the nasal cavities, that we perceive the perfume, and the peach completes the impression that it should produce. This will explain why the sensations which are usually accredited to the sense of taste are in reality much more complicated than is supposed, and that touch and smell contribute in great part to the complex effect. It may be said that without smell taste would be reduced to very little and its agreeable sensations much enfeebled. Taste and smell combine with and complete each other, and Thomson has very justly defined them as the instruments of a unique

* Here Guyot might safely add that these people who are so troublesomely importunate are generally those who have recourse to the addition of artificial aromas to their wines.

sense. It is a well-known fact that if the nose be held whilst tasting a substance we perceive the fundamental tastes, such as sweetness, bitterness, salt, and acid, but all the delicate flavors disappear completely.

We have now arrived at the sense of taste, or, as some call it, the tasting proper. The sense of taste, with its somewhat complicated apparatus, is the one which has the most important office to fulfill; by it we decide whether the wine has the freshness, solidity, strength, delicacy, etc., in short, the qualities required by the most critical taster.

The principal seat of the sense of taste is the tongue, although it seems to have been proved that both the anterior face of the membrane of the palate and the posterior part of the palate are capable of receiving gustatory impressions.

According to the illustrious Professor Lussana, the tip of the tongue is distinguished by its ability to detect the finest gradations of flavor, whilst the posterior part, on the other hand, is distinguished by the intensity of its sensations, and is therefore more impressed by repugnant flavors.

Different parts of the organs of taste receive different impressions from the same sapid substance.

The action of sapid substances in contact with the tasting apparatus is somewhat complex, and is physico-chemical rather than mechanical, as formerly supposed.

For this reason the particular gustatory sensation due to any alimentary substance is felt more keenly when the substance is kept for some time in contact with the tasting membranes, as is the case, for instance, in slow mastication.

This time, however, should not be too much prolonged in tasting wine, or it becomes impossible to distinguish between the many and diverse flavors which a wine presents.

The taster, having now critically examined the wine to the best of his ability, by means of the eye and the exterior part of the organ of smell, must pass quickly to the domain of the sense of taste.

To this end, he slightly lowers his head, carries the glass to his lips, and introduces a sip of the wine into the anterior part of his mouth, where the sense of taste receives its first impressions.

The taster retains the wine in this part of the mouth for a certain time; and in order better to perceive the various flavors that affect this part of the tasting apparatus, he divides and subdivides the wine with the tip of his tongue, or as experts express it, he "breaks up" the wine, in order to increase the surface of contact between the wine and the gums, palate, and tip of the tongue.

As soon as the taster has received a distinct impression of all the sensations caused by the wine in this part of the mouth—that is, of those due to sugar, acid, tannin, etc.—he slowly raises his head, thus allowing the wine to pass to the posterior part of the mouth, when he takes a short breath and slightly gargles; at this stage of the operation he will perceive any earthy, bitter, or mawkish taste, or any taste of wood, cork, etc., that the wine may have; here he will also remark the alcoholic strength or weakness of the wine. The wine is then, so to speak, left to itself and passes into the larynx, the œsophagus, and on into the stomach.

As the wine passes down the throat it gives off odors which, as has been mentioned, ascend to the palate and the internal nasal ducts. The

effect of these odors, and therefore of the qualities and defects of the wine, is intensified if the moment the wine is swallowed the mouth is moved as though masticating something.

It has been attempted to measure the duration of certain sensations; i. e., those due to the aromas, bouquets, flavors, alcoholic strength, and the various tastes of wine.

In general these sensations are perceived in the brief space of time of 3 seconds, and their duration varies from 10 to 20 seconds. After the wine has been swallowed all the sensations disappear in about 7 or 8 seconds. In certain special cases the aromas leave a more lasting impression; bad tastes persist longer than good ones. In some wines the aroma can be perceived for 55 or 60 seconds.

The sensation due to astringency is of short duration in fine wines, and is much less intense than in the case of wines made from immature grapes, where it makes a violent impression on the lips and the sides of the mouth, which lasts sometimes for 100 to 110 seconds.

Different bad tastes have different ways of showing themselves; some are noticeable the moment the wine enters the mouth, while others are not perceived till some seconds after the wine is swallowed.

Some moldy tastes do not manifest themselves for 7 or 8 seconds after the wine has left the mouth, but persist for 100 or 140 seconds.

The "goût de rance" is perceived in from 10 to 15 seconds, and lasts for 50 or 60 seconds. The bitterness of some wines makes itself felt in 4 or 5 seconds, and persists for as much as 280 seconds.

In tasting, it should be kept in mind that certain qualities are liable to variations, according to the condition and age of the wine. The delicacy of a wine, for example, is almost totally hidden when the wine is young; the more so the younger the wine. This is due to certain substances which are proper to new wines, but which, later, are deposited and disappear from the composition of the wine.

Aromas are more or less intense, according to their origin and to the very variable circumstances under which they are formed.

The sense of taste is the final judge, and from its sentence there is no appeal. But how much careful consideration should be used before this judgment is pronounced; what a multitude of sensations must be considered, on all of which this judgment must be based!

The tongue, the cheeks, the gums, the anterior and posterior palates, the larynx, the nasal cavities, and to a certain extent the stomach, all contribute their separate sensations, which must all be taken into account. Besides these, the taster has also the sensations received by the eye and the nose. With all this varied testimony to consider, he should reflect deeply before delivering his verdict. For this reason, the taster, during the tasting and the few moments following, truly solemn moments, should be completely undisturbed by noise or otherwise.

A taster can sometimes conveniently express his verdict of quality by means of numbers; usually those from 1 to 10 are used, and correspond to the following expressions:

10—Perfect.

9—Almost perfect.

8—Quite good.

7—Relatively good.

6—Fair; sound, but not harmonious.

From 5 to 0 indicate various defects, according to their gravity.

III.

QUALITIES AND DEFECTS OF WINES.

The art of wine tasting, like every art or science, has a language of its own, without which the taster could not properly express his criticisms, nor compare his opinions with those of other tasters regarding the same wine.

This renders it necessary to define or explain the various terms that have been adopted by tasters to express the sensations experienced by their senses of sight, smell, and taste, during the examination of a wine.

FOAM (*Spuma*, It.; *Mousse*, Fr.).—When a wine is poured from one vessel to another, or agitated in any way, there forms a more or less abundant foam; that is, at the surface of the wine there are formed in greater or less quantities collections of little gaseous bubbles.

FINE FOAM (*Spuma di grana fine*, It.; *Mousse à perles fines*, Fr.).—The foam due to the formation of very small bubbles.

COARSE FOAM (*Spuma di grana grossa*, It.; *Mousse à grosses perles*, Fr.).—When the bubbles are larger.

EVANESCENT FOAM (*Spuma evanescente*, It.; *Mousse évanouissante*, Fr.).—Said of that which disappears immediately, or almost as soon as formed. As the old saying has it: "*Vino che brucia la spuma*" (a wine that consumes its foam).

PERSISTENT FOAM (*Spuma persistente*, It.; *Mousse persistante*, Fr.).—When the foam lasts some time and disappears slowly.

Persistent foam, as a rule, is characteristic of a wine poor in alcohol; of a wine at a low temperature, or of a wine in need of racking, or, it may be, of a wine which is undergoing a slow fermentation, which may be either the normal and necessary alcoholic fermentation, or may be what is known as a secondary fermentation, in which case the wine is a prey to some malady—tartaric fermentation, for example.

The foam may also be persistent on account of effervescence, that is, the continued giving off of carbonic acid, which is dissolved in the wine, and which in escaping on the decrease of pressure forms little bubbles which renew the foam.

In the first cases cited above, the foam is usually limited to a more or less imperfect crown or ring of bubbles which form around the edge of the glass; or if the wine contains more than the usual amount of carbonic acid a bubble of gas will now and then be formed and rise to the surface.

When some disease is the cause of the persistent foam, especially if it be that known as "*subbollimento, cercone, or vino girato*" (*vin tourné* of the French), the circle formed is called "*unghia*" (nail), from which the expression "*il vino fa l'unghia nel bicchiere*." [This disease of turned wine is due to the filiform ferment, which destroys the tartar of the wine.—*Trans.*]

In the last case, when the persistent foam is due to effervescence, which may be of various intensities, several distinctions are made, of which the following are the principal:

SHARP, PUNGENT (*Frizzante, Piccante, Wine which has the Pinzo*, It.; *Mordant, Piquant*, Fr.).—In this case there is a somewhat abundant giving off of bubbles of carbonic acid when the wine is agitated, and even after, which tend to cling to the sides of the glass. Some one has written of a wine of this kind that "*nel berlo baciá e mordé*" (it kisses and bites); it makes itself felt as a smarting or pricking on the palate.

"*Sarà forse più frizzante
Più razente e più piccante.*"—Redi.

This pricking is caused by the presence of a larger amount of carbonic acid than is normal to the temperature and pressure.

The Tuscan usage of "*governo*" imparts this character to a wine.

"When the violent fermentation is over, throw in two handfuls of dried grapes to each vat; this will make the wine clearer and more piquant."—Davanzati.

However, Polacci rightly says: "For us a wine *governato* is always a defective wine."

FOAMING (*Spumeggiante*, It.; *Écumant*, Fr.).—This is said of wines which contain so much gas that when they are agitated bubbles are given off copiously, enough to form a layer of foam over the whole surface of the liquid. In the words of Redi:

"*Che nei vetri zampilla,
Salta, spumeggia, e brilla.*"

Wines which are bottled young, before they are well defecated, or which contain sugar when bottled, easily become "*spumeggiante*" when kept in a cool place.

SPARKLING (*Spumante, Mussante*, It.; *Mousseux*, Fr.).—This is said of wines which, after pouring into a glass, give off from every part an abundant supply of bubbles of carbonic acid, or foam, which collects at the surface and is continuously renewed for some time. The wine bubbles, and as is commonly said, pearls the surface.

In sparkling wines, the carbonic acid is in solution at a relatively high pressure.

In these wines, after the first violent ebullition of gas, there is what is known as the "*fontanella*," sparkling, which is due to a continuous development of very small bubbles of gas, which, starting from certain points at the sides or bottom of the glass, rise like little chains of beads to the surface, where they cause the phenomenon known as pearling.

Of sparkling wines there are three grades, based upon the amount of foaming, or rather on the amount of carbonic acid which is given off, and in the length of time during which the foaming continues.* These grades are:

CREAMING, GENTLY SPARKLING (*Mezzo spumante*, It.; *Crémant*, Fr.).—These are wines in which only a slight layer of foam forms, and which give off but a moderate amount of gas; that is, effervesce very slightly.

The pressure exerted by these wines on the interior of the bottles is less than three atmospheres.

ORDINARY SPARKLING, OR MEDIUM PRESSURE (*Spumante, bella spuma*, It.; *Mousseux ordinaires*, Fr.).—In these wines there is sufficient gas to cause the foam to flow from the bottle the moment it is uncorked. The

*The French have a fourth grade, which they call Tissane, and which includes second and third-rate wines, which are, however, fairly drinkable.

pressure in this case varies from three to three and one half atmospheres.

STRONGLY EFFERVESCENT (*Molto spumante, Spuma forte, It.; Grand mousseux, Fr.*).—In these the cork is forcibly ejected from the bottle when unwired, and the wine is sufficiently charged with gas to be expelled from the bottle by its own pressure.

In these wines the pressure approaches or surpasses four atmospheres. The maximum pressure that bottles will stand, without great danger, is about six atmospheres.*

Either too low or too high a pressure is a serious defect in sparkling wines. If the pressure is too low they do not effervesce; if, on the other hand, the pressure is too great, as in the case of bottles which the French call "recouleuses," there is a ruinous percentage of broken bottles, or if the bottles do not burst the cork is driven out, and most of the wine lost.

The carbonic acid which is dissolved in these wines, is produced by the fermentation of added sugar, or of a portion of that which the must contained.

As already stated, wines which have been fermented dry, and not with a view of making them sparkling, can be rendered so afterwards by being charged, at a high pressure and low temperature, with carbonic acid. On this is based the system of Carpené, a system now much used both in Italy and abroad.

Sparkling wines may be:

SWEET (*Dolci, It.; Doux, Fr.*).—When the sweetness is decided and due to a large addition of syrup.

DRY (very slightly sweet) (*Semidolci, Dolcigni, It.; Douceâtres, Fr.*).—When the sweetness is slight or hardly noticeable.

EXTRA DRY (*Secchi, Asciutti, It.; Secs, Fr.*).—Which the English taste calls for; when there is no trace of a taste of sweetness.

In various red wines the foam may present different colors, as:

WHITE (*Bianca, It.; Blanche, Fr.*).—The case usually with old wines. There are, also, in some localities, young red wines of which the foam is white or whitish.

ROSE (*Rosea, It.; Rosée, Fr.*).—This is the case with lightly colored young wines, and is characteristic, it may be said, of mature wines.

RED, RUBY (*Rossa, Rossa rubino, Vermiglia, It.; Rouge, Vermeille, Fr.*). The color of the foam of heavy-bodied, deeply colored young wines.

ORANGE RED (*Rossa granato, It.; Rouge grenat, Fr.*).—This is a deep vinous red, resembling the color of pomegranates, and is often seen in cutting wines, or those blended with them.

BLuish (*Turchinicia, Bleuâstra, It.; Bleuâtre, Fr.*).—Seen in wines poor in acid; as in some cutting wines which possess only from 3 to 4 per cent in acid.

BRIGHT, CLEAR (*Viva, Brillante, Smagliante, It.; Vive, Brillante, Fr.*). When the foam has a clear, crystalline appearance; this is generally seen in generous, young wines of full acidity.

DULL, DEAD (*Poco viva, Morta, It.; Morte, Fr.*).—The opposite of the

*As a rule, authors give higher figures for the pressure of the various kinds of champagne than I have indicated, but the fact is, that my figures, if not too low, are certainly not too high. Of this, I am assured by Professor Carpené, who, in his experiments with sparkling wines, had occasion to test the pressures of many wines from the best accredited foreign and domestic houses.

foregoing; indicates a diseased or decrepit wine, or one in need of racking.

After the foam is disposed of, the taster remarks on the degree of limpidity which the wine presents; a wine is said to be:

CLEAR (*Limpido, It.; Limpide, Fr.*).—When it is transparent and without cloudiness; or what Columella calls "*vinum defaecatum quam limpidissimum.*"

BRIGHT, BRILLIANT (*Brillante, Diafano, Lucido, Smagliante, It.; Brillant, Lucide, Luisant, Fr.*).—These terms are used to express a perfect and, as it were, crystalline transparency. This is the condition of wines that have been well clarified or filtered.

It may be noted here that clarification, unlike filtration, slightly modifies the composition of wine, as is proved by the quantitative determination of Professor Carpené, relative to wines that had been treated with white of egg. Following are the results of these determinations:

	Tannin.	Enocyanin.	Extractive Substances.	Ash.
Wine of 1873, unclarified.....	0.91	0.42	21.39	3.12
Wine of 1873, clarified.....	0.41	0.24	19.91	3.06
Wine of 1874, unclarified.....	1.15	0.82	24.22	2.80
Wine of 1874, clarified.....	0.57	0.44	20.17	2.79

The quantity of albumen employed was about 100 c.c. per hectolitre (1 per m., or 1 pint to 125 gallons), which is a usual dose.

CLOUDY, DULL (*Vellato, Appannato, It.; Voilé, Fr.*).—This is said of wines that are not quite clear, that show a slight cloud or dimness, due to the presence in them of substances in suspense in a very fine state of subdivision. This is noticed, for example, in wines recently racked, especially when, during the operation, they have been much exposed to the air and drawn into well-sulphured barrels.

This slight defect, which is easily cured, is also frequently found in wines made from grapes grown on rich soil, and also in wines which, being poor in acid, have not undergone a complete fermentation.

Wines, of course, may possess different degrees of cloudiness, which are generally expressed by the terms cloudy, slightly cloudy, nearly clear, etc.

TURBID, MURKY, THICK (*Torvido, It.; Trouble, Cassé, Fr.*).—When the suspended particles are large enough to be almost visible to the naked eye, and present in sufficient quantity to completely destroy the transparency of the wine and make it almost opaque.*

*Old bottled wines may be turbid either because they have become unsound, as happens very easily when bottled too young, or because they have not been thoroughly defecated before being bottled, or it may be, because they have been moved in such a manner as to stir up the slight deposit which all wines throw down in time in greater or less quantities. If the wine is unsound there is no need of precautions, for the wine has become undrinkable; if, on the contrary, the turbid wine is sound it must be moved with the greatest caution, and to prepare it for the table it will be found useful to follow the rules of C. Ladrey, who writes thus:

"When the time arrives to drink a wine which has lain in bottle for some years, the first thing to do is to examine the bottle with great care when it is lifted up. It should be lifted up cautiously, retaining it in its horizontal position. By carrying the wine into the light, daylight or artificial, it is easy to ascertain whether the wine is perfectly clear or has a deposit. If, as may happen, the wine be perfectly clear, without trace of deposit, the bottle may be stood up and the wine served from it without decantation. This case, however, is very rare, and, especially with old wines, there is generally a deposit.

A wine from low-land grapes, in which tartaric fermentation has reached the stage of development when carbonic acid begins to be freely given off, is a good example of this condition.

This defect may be simply transitory, as when a wine has lately received some treatment, or an addition of alcohol or tartaric acid, or directly after cutting or mixing wines, or when a wine has been much shaken or been exposed to too low a temperature. If the defect is permanent, it shows that the wine is diseased or ready to become so, or that the wine has been badly made. In the former cases the wine simply needs time to depose or an increase of temperature, when it will right itself. In the latter cases some special treatment is necessary, such as sulphuring, addition of tartaric acid, clarification, pasteurizing, etc.

OPALESCENT, IRIDESCENT (*Cangiante, Opalescente, Iridescente, It.; Chatoyant, Fr.*).—When the light in passing through the wine is decomposed, that is, when in looking through the wine rays of different colors are seen. This iridescence is best seen at the surface of the liquid and near where it is in contact with the glass; it is due, not to reflection or refraction, but to the phenomenon of interference.

A wine exhibiting this peculiarity is open to grave suspicion of unsoundness, if it is not already in an advanced stage of disease.

As an example of a wine in this condition, may be cited one which is, in the first phases of the disease, known as "subbollimento."* If a little of this wine is left exposed to the air it first becomes turbid, and loses its red color; then a precipitate forms and leaves a yellowish, sour, somewhat bitter liquid on top. As the disease progresses, if the wine is slightly shaken, mucous clouds will be seen floating in it, at the surfaces of which the above-mentioned phenomenon of interference may be seen.

In the time of Pliny, to describe the color of a wine they had only the four following epithets: *album, fulvum, sanguineum, nigrum*.

In those days they were easily satisfied; now we use the following terms to describe the colors of red and white wines:

COLORLESS, DECOLORIZED (*Incolore, Scolorito, Decolorato, It.; Incolore, Decoloré, Fr.*).—When the wine has almost the appearance of pure water; when the rays of light pass through it without suffering any or only imperceptible changes.

Colorless wines are easily obtained from perfectly ripe white grapes, picked and handled with great care, and crushed when quite fresh and quite cool; then by exercising the most scrupulous cleanliness during the vinification and keeping of the wine, and by fermenting the must after it has been well defecated. If a wine is made which is not per-

In this case we must be careful not to mix the limpid part of the wine with the deposit, and before raising the bottle up the wine should be decanted, which in its result is an operation exactly similar to racking. This decantation should be made in the cellar, and demands some precautions. First the neck of the bottle is carefully raised, but not too high; it is then uncorked, care being taken not to subject it to any brusque motion either in raising it or in drawing the cork. The wine is then poured into another perfectly clean bottle, taking care to stop before the smallest part of the deposit has passed into the fresh bottle or decanter. The quantity of wine lost by this method is very small, and the wine that is saved can be drunk to the last drop. If, on the contrary, a wine which has only a very slight deposit is placed on the table without decanting, the second or third glass will commence to show a loss of brightness and the wine will have lost its agreeableness. There are some very simple machines made, which work on the principle of the siphon, and which greatly facilitate the operation of decantation.

*"La pousse" of the French, a kind of tartaric fermentation which is fully described on a subsequent page.—*Trans.*

fectly colorless, it may be rendered so by the use of animal charcoal, properly prepared, that is to say, in such a way as to prevent its diminishing the acidity of the wine. If this precaution is not taken, the wine, on account of its diminished acidity, will quickly turn yellowish on account of the formation of ferric compounds, which, under these conditions, takes place with great readiness.

STRAW-COLORED (*Paglierino, It.; Couleur de paille, Fr.*).—Of the color of straw, but somewhat pale.

AMBER, YELLOW (*Giallo, It.; Jaune, Fr.*).—Is said of wines which have a deeper straw color.*

GOLDEN, GOLDEN-YELLOW (*Giallo dorato, Aurato, Dorato, It.; Doré, Fr.*).—This epithet sufficiently explains itself.

"*Egli è il vero oro potabile*," wrote Redi of the wine of Trebbiano.

GREENISH (*Verdognolo, Verdiccio, It.; Verdâtre, Fr.*).—When a wine has a slight greenish tint, resembling somewhat the green of grass. This color is characteristic of certain varieties of grapes; for example, the Verdea or Bergo.

Regarding the wine of this variety, it is said that the Verdea of Tuscany is not so called on account of its green taste, but because of its greenish tint.

Frederick the Great, of Prussia, had a great predilection for the wine of Verdea.

This greenish color is also characteristic of the wines of Reno, and in general of wines made from somewhat acid grapes.

PINKISH-YELLOW, OR PINKISH STRAW-COLOR (*Paglierino rossastro, Giallo rossastro, It.; Paille roussâtre, Fr.*).—Sometimes a wine, in addition to

*This yellow color may be natural and proper to the wine, or it may be a color which it has acquired from several causes, among which are some that have very grievous effects on the wine, and may be considered properly as maladies.

The wines most generally subject to this disease of becoming yellow are those poor in alcohol, tartar, tartaric acid, and tannin, and which on the other hand are rich in malic acid.

I have already alluded to one of these causes above, namely, the presence of iron compounds. Some colorless wines, which are rather poor in acid, become, when placed in contact with the air, yellow or yellowish brown, in consequence of the formation of complex compounds, ferric, humic, etc.

The commonest causes of the yellowing of wines can be traced to the conditions under which the vintage has taken place; if, for instance, the season has been cold and rainy, and the grapes have been gathered after the vines have in great part been denuded of their foliage, if the bunches contain decayed, soft, insipid grapes poor in acid and sugar, a wine of poor keeping qualities is obtained, and one very likely to become yellow, unless art comes to the aid of nature.

Robinet, who has made special investigations with regard to the causes of this deterioration of white wines, distinguishes between that due to a fermentation caused by a mycoderme, and those due to chemical action, and among the latter he mentions some which give rise to the formation of malic ether, which reacts on the sugar. I should, however, remark here that after stating his belief in the formation of the malic ether, he declares that he has been unable to find the rational equation of the reaction, or definite proof of its existence, but bases his belief in the formation of the malic ether on the taste and pronounced odor of cider which the wine acquires—an odor which is characteristic of the above substance.

Robinet also makes the important observation that during his researches he had noticed the disappearance of the glycerine from wines which were becoming yellow. This disappearance of the glycerine would lead one to believe that the reactions which take place are much more complicated than supposed by Robinet, especially in consideration of the fact that the glycerine is subject to transformations, like the other ingredients of wine.

Instead of trying to cure or ameliorate this defect in wines, it should be prevented, which can be done by the addition of alcohol and acids.

The secondary fermentation which causes this disease is due, still according to Robinet, to a particular mycoderme, which can be seen distinctly with a magnifying power of nine hundred diameters. This mycoderme is extremely small, and of an oblong shape; it is $\frac{1}{100}$ m.m. in length, and $\frac{1}{200}$ m.m. in width.

its yellow or straw color, will have a pinkish tint of more or less intensity. This may be considered as due to imperfect cleanliness of the vessels used in wine making, or of the barrels in which the wine has been put.

ROSE-COLORED, SHILLER (*Rosato*, It.; *Rosé*, Fr.).—White wines made from red grapes frequently possess this color in greater or less degree; especially is this the case when the grapes have not been picked and handled with great care, or when the grapes have become the least heated.

A white wine may also acquire this color by contact with barrels or utensils which have been used for red wine and not been thoroughly cleansed afterwards.

This color is sometimes produced artificially. In France they use extensively *teinte de Fismes*, so called after the town in which it is manufactured. It is claimed that it is free from alum and sulphuric acid,* but wrongly.

White wines which have commenced to spoil, or in which viscous fermentation has started, and which begin to become brownish, or even bluish, and at the same time turbid, what the French call *vin oeil de perdrix*, are rendered salable by the use of this *teinte de Fismes*, and are sold by the French under the name of *vins rosés*.

Jacquesson, *père*, states that this coloring fluid not only colors and clarifies the wine, but also arrests the progress of the disease, or prevents it if it is to be feared. This fluid is also used in France for coloring sparkling wines.

BLUIISH-BROWN, BROWN, YELLOW (*Bruno-bleuastro*, *Giallo-bruno*, It.; *Brun-bleuâtre*, Fr.).—This color, which the French call *oeil de perdrix* (partridge-eye), is a dull, dark yellow, proper to some old, southern wines, but due in the majority of cases in which it is found to some malady of the wine.†

This phenomenon is observed not only in old but also in young wines, both red and white. Very probably its origin lies in several causes, as the numerous explanations given by different authors would lead us to believe. Nessler has studied the change of color as it takes place in white wines. He tells us that the substances that cause the coloration, more or less deep, of the wine are contained in the stems and the seeds. Thus, wines which have been fermented in contact with the solid part of the grapes blacken very easily when exposed to the air. The presence of bad grapes in the fermentation also tends to render a wine liable to this discoloration.

This change of white wine depends directly on the action of the air;

* The *vin*, or *teinte de Fismes*, was first prepared by Manceau by boiling elderberries and cream of tartar together.

† It sometimes happens, writes Robinet, that a perfectly bright white wine which has never been racked or otherwise treated before, is racked from its lees and treated with tannin and some clarifying material; then instead of becoming bright and clear the operations to which it has been treated have had diametrically the opposite effect. The wine has not taken the clarification, as the cellarmen say, has a bluish tint, and is turbid.

This change or malady of the "blue color" happens most generally in wines of low acid and alcoholic contents, and which are at the same time rich in nitrogenous substances. According to Robinet this malady is due to a secondary fermentation, caused by a mycoderma which is analogous to the *mycoderma croceum*, and has a very ephemeral existence.

To cure this disease in a wine it generally suffices to raise the alcoholic strength, or sometimes an addition of six or eight grains of tannin per hectolitre is necessary. In the latter case the wine is allowed to settle for twenty-four hours after the addition of tannin, and then clarified with isinglass.

The above mycoderma is killed and precipitated by cold.

the wine loses its limpidity, becomes cloudy, and a black precipitate is formed; meanwhile the taste of the wine often changes. The black substance may be decolorized by sulphurous acid; the use of this substance arrests or retards the blackening of the wine.

Wines made from grapes poor in tartaric, malic acid, etc., like those which have been gathered when wet with dew or rain, or those which have been injured by cryptogams, are liable, when exposed to the air, to become cloudy and dark in color.

The presence of an excess of iron in the white wines of certain localities of the southern provinces is the reason why, when they are at all exposed to the air, their color changes to a blackish green.

Not southern wines alone, but also those from northern provinces, when they do not contain a sufficient quantity of acid, and more especially of tartaric acid, acquire this color. Chemists explain this phenomenon in different ways, though all admit that it is due to the presence of some of the compounds of iron. Nessler tells us that wines produced on soils rich in the salts of iron, and even wines which have been for any length of time in contact with iron, as happens when there is an iron rod between the heads of the cask, or when there are nails in the cask, etc., if they become exposed to the air, turn black, for then the protoxide or ferrous oxide contained in the wine changes in contact with the air to sesquioxide or ferric oxide. A black compound is then formed by the combination of the ferric oxide with the tannin; this black color is not obtained with the protoxide. Other chemists explain the phenomenon by supposing that there occur or are formed in the wine certain humic products analogous to those which are formed by the decomposition of vegetable substances. These substances are feebly acid, and have a considerable dissolving power on the iron. Thus there are formed in the wine certain of the lower compounds of iron, which, on exposure to the air, change to the higher compounds, and give the wine the blackish tint before spoken of. The wine then becomes turbid, and the flavor undergoes certain peculiar changes.

Formerly some sparkling wines were made of this color, but now it is no longer found but as a defect.

DIRTY (*Sporco*, It.; *Terne*, Fr.).—A diseased, badly made, or badly kept wine sometimes becomes turbid, and its natural color is masked by other colors, giving the impression of something soiled or dirty.

Among red wines the following are the colors most generally recognized; they may be of more or less intensity:

VERY LIGHT RED (*Claretto*, *Chiarello*, *Chiaretto*, It.; *Clairret*, Fr.).—These terms are used to describe a class of wines which contain the least color of any red wines; the cause of this poverty of color may be in the nature of the grape, the mode of preparation, or it may be that the wine has been diluted with water.

These wines form the connecting link between white and red wines.

Trinci, writing of these wines, says: "The French 'claretto' is a smooth, vinous, lightly colored wine, with little aroma; slow and long in maturing, and not pleasing when drunk alone; blended, however, in proper proportion, it is extremely good."

The "claretto" drunk by Redi, however, must have been very different from this, or he would not have written:

"Benedetto
Quel claretto
Che si spilla in Avignone."

RUBY (*Rubino*, It.; *Rubis*, Fr.).—Wines which have a fine, vinous red, which recalls the color of the ruby.

This color is that found most commonly in table wines; for instance, the wine of Chianti; it is also the color of the wines of Bordeaux.

Some writers speak of vermilion wines, but a wine is never really of that tint; wines rich in acid and of bright, intense ruby, will appear for the moment to be vermilion immediately after being racked, on account of the presence of a slight cloudiness.

PURPLE (*Porporino*, It.; *Pourpré*, Fr.).—The case where the natural red of wine tends slightly to violet.

This color is seen in Montepulciano when it has reached perfection.

GARNET, RED (*Granato*, *Rosso cupo*, It.; *Rouge sombre*, Fr.).—Said of wines which have a more or less intense blood-red, recalling the color of garnets and similar precious stones, and of some varieties of gooseberries, etc.

This garnet tint is seen in heavy-bodied dinner wines, such as Barbera, Gattinara, Borgogna, and in wines made from grapes grown on clayey and ferruginous soils. These wines in aging are apt to acquire more or less of the orange tint.

BLACK (*Nero*, It.; *Noir*, Fr.).—This color, the *nigrum* of the Romans, is really never found in wine; the darkest wines, made from the Teinturiers, are not quite black, nor is even the concentrated solution of encocyanin obtained by the Carpené-Comboni process.

VIOLET, BLuish (*Violaceo*, *Turchiniccio*, *Bleauastro*, It.; *Bleauâtre*, *Violacé*, Fr.).—This color is seen in a more or less marked degree in blending and other wines poor in acid. This tint is due to the violet coloring matter which is contained in certain dark wines of southern Italy. It is very unstable, and precipitates with great readiness. It is also found in the wines from certain American coloring grapes, such as the Jacques, the Marion, and York's Madeira, when they have been made without addition of plaster or tartaric acid.

ORANGE, YELLOWISH-RED, RUSTY (*Aranciato*, *Giallo aranciato*, *Color matone*, *Rossico*, It.; *Orangé*, *Pelure d'oignon*, Fr.).—These are the colors or tints of old or decrepit wines. By decrepit wines should be understood wines which have passed their prime and have begun to lose their valuable qualities.

These tints are seen sometimes in young wines, but less marked than in old; especially in those which, at first, have much of the bluish tint, and which deposit their color quickly.

Old wines often lose all, or nearly all, of their color, and become what is called "scolorito," decolorized or faded.

DARK COLORED (*Colorato*, It.; *Coloré*, Fr.).—Said of wines that have relatively a great deal of color.

Wines may be divided according to intensity of color into deep-colored, medium-colored, and light-colored wines.

Deep-colored wines are harsh and indigestible.

I will now pass in review the qualities and defects of which the senses of taste and smell take cognizance.

AROMA (*Aroma*, It.; *Arôme*, Fr.).—By aroma must not be understood simply those odors which are delicate and agreeable, as when speaking of bouquet; for example, the foxy odor or aroma of certain American

grapes, varieties of the species *Vitis labrusca*, and of the wine made from them, is far from agreeable.

The aroma is the odor which comes from the skins of aromatic grapes,* and varies in quantity and quality, according to the variety of grape and the degree of its maturity. It passes into the wine in wine making; the aroma therefore exists in the grapes as well as in the wine.

BOUQUET† (*Profumo*, It.; *Bouquet*, Fr.).—Every fine wine exhales an odor peculiar to itself, which is always delicate and pleasing. Exception may be made of artificial bouquets, which, if not absolutely disagreeable in themselves, are always too strong and intense in a wine.

The bouquet is due to the volatilization at ordinary temperature of certain substances known as ethers, which are formed by the reactions of the acids and alcohols in the wine during its process of aging.‡

Thus, the bouquet is not to be found ready formed in the grape, as is the case of the aroma.

SÈVE (*Abboccato*, It.; *Sève*, Fr.; *Göhr*, Ger.).—The "sève" is neither bouquet nor aroma; it is a certain savor, a certain fragrant quality of the wine due to a smooth and delicate blending, of perfusions of aromas and bouquets, which is perceived when the wine is in the mouth and in the act of swallowing, affecting the olfactory organs through the internal nasal ducts. The bouquet and aroma affect the senses before, the sève after drinking the wine.

Carpené, writing of Moscato de Segesta, says: "Of the most delicate fragrance and exquisite flavor. It is a dainty, fruity wine, which fills the mouth with an harmonious ensemble of delicious flavors, which cannot be described, but can only be experienced."

Sève, which is especially the property of fine wines, is due to the presence of certain substances which are formed in the grapes during

*The ancients held aromatic wines in high estimation. They added to the must, during fermentation, different varieties of apples, then cane, amomum, cassia, saffron, ginger, and other species of aromas, to communicate the odor that they desired.

The aroma most highly appreciated was that obtained by the addition of myrrh. We read, in fact, in Pliny: *Lautissima apud priscos vina erant myrrhæ odore condita, ut adparet Plauti fabula, quæ Persa scribitur, quamquam in ea et calamos addi jubet.*

Peppered wine, which was prepared by fermenting the must with apples and pepper, was very much appreciated in the time of Pliny.

†Even the bouquet of wines has not escaped imitation and adulteration. The manufacture of artificial bouquets or perfumes for wines has become a regular industry in France and Germany, where it is carried on on a large scale. There is a large consumption of such articles as "bouquet" of Pomard, or of Bourgogne, extract of Bourdeaux, the "Rancio des vins," "sève" of Baumé, of Médoc, of St. Julien, of Champagne, of Sillery, etc.

The substances most usually employed to add an artificial bouquet to dinner wines, are: Florentine iris, raspberries, cloves, vine flowers, mignonette, nutmegs, bitter almonds, etc. To these should be added certain chemical products which are prepared more especially in Germany. All these attempts to imitate nature have been but very partially successful.

A wine may be perfumed artificially, but it is impossible to give it "sève." This artificial perfume is always too pronounced, and is never as delicate as the natural bouquet of wine. These artificial bouquets impress the sense of smell, but not that of taste. If a perfumed wine, then, is tasted without being smelled, its natural "sève" can be distinguished. Artificial aromas are not lasting, and gradually disappear from the wine.

‡Chemically, the difference between aroma and bouquet is, according to Maumené and Berthelot, the following:

The former is due to certain hydro-carbons and to the products of their oxidation; perhaps, also, as Ordonneau states, to the ether of a high, fatty acid produced by intercellular alcoholic fermentation, and which, being fixed, remains in the pellicle; this has enabled the experimenter to obtain it from the pomace of Folle Blanche.

The latter seems to be due to a mixture of aldehydes with one or more essential oils and of numerous ethers, the product of the combination of fatty and other polyatomic acids with ethylic and other alcohols; there are, for instance, valerian, amylic, propyl-acetic, etc.

the short time preceding their complete maturity; these substances are peculiar to certain varieties of grapes, and owe their existence also to careful cultivation, as well as to certain conditions of climate and soil.*

In analyzing wine, writes Fauré, I have observed that fine and delicate wines, those renowned for their flavor and general high quality, contain a certain glutinous, viscid substance, which exists only in almost inappreciable quantities in ordinary wines, and is quite absent from inferior ones.

This principle, to which wine owes its *sève*, has been called by Fauré *œnanthin*,† or flower of wine, and is only found in grapes which are completely mature. Some vineyards, which usually produce grapes containing this substance, fail to do so in stormy seasons. The only vines containing it in such years are those produced on dry sandy or gravelly soils. The same variety of vines, which, when grown on an appropriate soil, gives a wine full of *sève*, will, when grown on a rich, heavy, or clayey one, produce a wine containing little or no *œnanthin*.

Thus it can be seen that the preëminence of high-class wines is not due to the caprice of the taster, but to actual differences of composition, and to the presence of principles not found in inferior wines.

The ordinary wines of the three communes of the Gironde, where the four high-class Bordeaux wines are produced, are, in general, poor in *œnanthin*. These four wines, however, contain a larger quantity of the substance, as may be seen by the following:

œnanthin contained in vines of—

High Class.		Ordinary.	
Chateaux Margaux.....	1.25	Margaux.....	0.70
Chateau Lafite.....	1.20	Pauillac.....	0.75
Chateau Latour.....	1.10	Pessac.....	0.50
Haut-Brion.....	.65		

FLAVOR (*Sapore*, It.; *Saveur*, Fr.).—In this character we have the effect of the wine on the sense of taste, and more particularly on the tongue, which best distinguishes between various tastes. The flavor is distinct from either aroma, bouquet, or “*sève*”; unlike the last, it does not affect the sense of smell. As has been shown, the *sève* is perceived after the wine has passed the base of the tongue, the soft palate; the taste, on the contrary, or better, the flavors, are perceived almost immediately, and continue to affect the tongue and its sides, or posterior

*The result of many observations and studies regarding the influence of soil composition or the character of wine, may be summed up as follows: High alcoholic strength is characteristic of wines grown on calcareous soils; color depends on the iron in the soil; smoothness on the alumina and on the variety of grape; bouquet on the silica.

Chambertin, writes Julian, is a wine which has a good color, much *sève*, is very delicate and smooth, faultless in taste, and possessing the most agreeable bouquet.

The vineyard which produces this wine has the following soil composition:

Alkaline salts.....	0.031
Carbonate of calcium and magnesium.....	4.425
Ferric oxide.....	2.961
Phosphoric acid.....	0.235
Alumina.....	2.063
Silica (soluble).....	0.110
Organic matter.....	1.973
Insoluble residue (silica).....	89.302

†By *œnanthin* should not be understood, as perhaps was done by Fauré, a single chemical compound, but rather a complex mixture of ethers.

portion, with a series of sensations which are agreeable or disagreeable, according to the nature of the flavors and their degree of intensity.*

NEUTRAL FLAVOR (*Sapore neutro*, It.; *Saveur neutre*, Fr.).—A wine is said to be neutral when it has no marked aroma or taste.†

Wines of neutral taste are the best base for the making of imitative wines, as they acquire most easily the taste of the wines with which they are blended.

VAPID, FLAT, INSIPID (*Insipido*, It.; *Plat*, Fr.).—A wine is vapid when it is lacking in alcohol and vinosity, or when, without having any defect

*With regard to tastes in general, writers are at variance. The greater or less number of tastes and the possibility of their classification have been discussed.

The number of tastes may be considered as infinite, and therefore a classification almost impossible. Such classification, however, has been attempted. Haller distinguishes twelve tastes, which have been reduced by Linnæus to ten: sweet, acrid, fatty, astringent, bitter, viscous, saltish, watery, and insipid.

Vintschgau proposes another taste—metallic.

Physiologists distinguish in the sense of taste four specific energies, that is, four elementary sensations, viz.: sweet, bitter, acid, and salt. The first two affect only the nerves of taste; the acid taste, on the other hand, if too strong, may cause pain, for which reason Vintschgau believed that acid and salt tastes affect also the sense of feeling, as is seen in touching concentrated solutions of acids.

Nothing is known with certainty as to the way in which different tastes are distinguished, and we must be content with supposing that each flavor—sweet, sour, bitter, salt—acts upon special nerves which serve to distinguish them. This is the more probable, as different parts of the tongue are unequally affected by different tastes. We are still more in the dark regarding the intimate nature of the tastes, the chemical composition of the substances which they characterize seeming to have no connection with them.

The chemical composition of a substance has nothing to do with its sweet, bitter, or salt taste; with regard to the acid taste, however, it may be said that every substance which tastes acid is also an acid from the chemical point of view.

†The vineyardist in making a choice of varieties to plant should keep in view the flavor which they will give to his wine. If he is planting in a new locality, where it cannot be known what kind of grape will there best develop its flavor, he should choose a variety which gives a wine of neutral taste.

The French, who are masters of the art of imitating wines, have this maxim: “There are more buyers than there are connoisseurs.”

Trusting to the truth of this saying, they have been able to establish that great commerce of wine which has become one of the principal sources of riches to France. The cities of Certe, Bordeaux, Marseilles, Lunel, Montpellier, and others of the south of France are centers of the production of large quantities of “wines of imitation.”

Do you wish to make, for example, a hectolitre of fine Bordeaux?

Take—

Red wine of the south (Roussillon or Narbonne).....	60 litres.
White wine of good quality.....	25 litres.
Old wine of Alicante.....	12 litres.
Old wine of Malaga.....	3 litres.
“Conservatore œnanthico”.....	25 grammes.

The *œnanthico* conservative is dissolved in about a litre of warm white wine; the whole is then well mixed and allowed to stand for two weeks. During this time a slow, insensible fermentation goes on, which completely mixes or blends the ingredients.

The wine is then drawn into sulphured casks, clarified, racked again, and the Bordeaux is made.

This, however, is too expensive a Bordeaux; here is a cheaper one:

Red common Spanish wine.....	70 litres.
Wine of Narbonne.....	25 litres.
Wine of Malaga.....	5 litres.
Bordeaux extract.....	A quarter of a bottle.
œnanthico conservative.....	30 grammes.

This is treated in the same way as the first.

If a still cheaper Bordeaux is desired—

Ordinary red wine.....	81 litres.
Roussillon and Narbonne.....	15 litres.
Old brandy.....	4 litres.
Bordeaux extract.....	A quarter of a bottle.
œnanthico conservative.....	30 grammes.

The above information is for the edification of those who prefer a bottle of this Bordeaux to a bottle of Chianti, of Valpolicella, of Valtellina, and of many other Italian wines which are far superior to these French concoctions.

due to secondary fermentations, it lacks some of those qualities which together render a wine agreeable.

An insipid wine may have plenty of color, however. Insipid wines are very subject to unfavorable changes.

SAPID (*Sapido*, It.; *Sapide*, Fr.).—A wine is described as sapid; it is meant that the acids are agreeable in quality and proportionate in quantity.

VINOUS, VINOSITY* (*Vinoso, Vinosita*, It.; *Vineux, Vinosité*, Fr.).—A wine is said to possess vinosity when it imparts in a certain degree that sensation of warmth characteristic of the alcoholic flavor.

WEAK (*Debole, Vino che scappa in bocca*, It.; *Faible, peu alcoolique*, Fr.). A wine is said to be weak when it is of low alcoholic strength, or when its alcoholic contents are not in proportion to its other constituents. Wines of this character have in general little flavor, are insipid, and difficult to keep, on account of the gummy or mucilaginous substances which they contain, and to which they owe what little flavor they have.

LIGHT (*Leggero, Sottile*, It.; *Leger, Mince*, Fr.).—A light wine is one which is of good quality, but at the same time contains a relatively small amount of color, body, and alcohol, no prominent flavors, and no sweetness. The general effect of a light wine is one of delicacy, though there exists a just equilibrium between the various constituents.

SOFT, MILD (*Molle*, It.; *Mou*, Fr.).—A mild wine is one which does not affect the palate by its harshness or astringency, as do rougher wines. Softness characterizes wines which are neither sweet nor dry, and not too alcoholic.

ALCOHOLIC (*Alcoolico*, It.; *Alcoolique*, Fr.).—When a wine is spoken of as alcoholic, it is generally meant to be one containing a relatively high per cent of alcohol, but of an unsatisfactory and unsatisfying quality.

GENEROUS (*Generoso*, It.; *Genereux*, Fr.).—A generous wine is one with plenty of alcohol, but of a smooth, warming, strengthening character; one of which a small glass produces a feeling of well-being and sensible tonic effects.

WARM, HOT (*Caldo*, It.; *Chaud*, Fr.).—A hot wine is one containing a good deal of alcohol, which produces a somewhat burning sensation in the mouth and stomach.

SHARP, LIVELY (*Vivo*, It.; *Vif*, Fr.).—This is said of a wine which, without being pronouncedly acid or alcoholic, affects the palate vividly. It is a quality compatible with lightness, but not with smoothness.

FULLNESS, ROUNDNESS (*Stoffa*, It.; *Étoffe*, Fr.).—Expressive of a robust homogeneity, which gives the impression of solidity and good constitution.

BODY (*Corpo*, It.; *Corps*, Fr.).—A wine is heavy bodied when it is rich in extractive matter and has high vinosity.

HEADY (*Fumosa*, It.; *Fumeux*, Fr.).—Wines which contain much carbonic acid, and thus go quickly to the head, produce effects that are usually confounded with those of drunkenness, but which, in reality, differ very much from them physiologically. Wines of this character are unwholesome.

* Many use this word in a somewhat different sense; by it they mean "wine-like;" that is, having a full supply of the quality or qualities which preëminently distinguish wine from other alcoholic beverages.—*Trans.*

DENSE, PULPY (*Carnoso, Polpato, Maccherone*, It.; *Charnu, Pulpeux, Lourd*, Fr.).—Expressive of a wine that has what one might almost call a pasty consistency.

HEAVY, COARSE (*Grave, Gravone, Pesante, Capitoso*, It.; *Lourd, Gros, Pesant, Capiteux*, Fr.).—Wines which have much body and little alcohol, and which, even when drunk in small quantities, go to the head and weigh on the stomach.

CLEAN (*Franco*, It.; *Franc*, Fr.).—Said of a wine which does not leave the slightest suspicion of any taste indicating unsoundness, or of any defect due to the bad condition of the grapes from which it was made, or to neglect or improper handling of the wine.

HARMONIOUS (*Armonico*, It.; *Harmonique*, Fr.).—Well constituted. This is said of a wine when its constituents are in exactly the proper proportions, well balanced and blended, forming a perfect whole, which is at the same time pleasing and satisfactory.

WINE THAT ENDS WELL (*Vino che finisce bene*, It.; *Vin qui finit bien*, Fr.).—This is an expression used by the taster to define an impression that remains for a certain time after drinking a fine wine; it means a wine in which the constituents are harmonious, and remain so even after the wine has passed from the mouth, impressing the senses with nothing but pleasing sensations to the end. These sensations continue even after the wine has been swallowed, insomuch that one might almost say that it wished to prolong the pleasure of the drinker by a fresh visit to the organs of taste.

WINE THAT ENDS QUICKLY (*Vino che finisce presto*, It.; *Vin qui finit vite*, Fr.).—Wine that leaves but an ephemeral sensation in the mouth; that is to say, almost as soon as the wine is swallowed all trace of it is gone, and the palate, tongue, and stomach seek in vain to recall its character, flavor, bouquet—all have gone, all have disappeared.

WINE THAT ENDS BADLY (*Vino che finisce male*, It.; *Vin qui finit mal*, Fr.).—A wine that after swallowing leaves a disagreeable taste, bitter, woody, etc., in the mouth.

DELICATE (*Delicato*, It.; *Delicate*, Fr.).—A wine to be delicate must be perfectly harmonious, soft, and agreeable.

FINE, OR HIGH QUALITY (*Fino*, It.; *Fin*, Fr.).—A wine that unites a natural delicacy with an exceptionally agreeable flavor and delicious bouquet.

MUTE (*Muto*, It.; *Muet*, Fr.).—Said of unfermented or only partially fermented wines; they are characterized by a sweetish or gummy taste. They are wines which have been made from musts treated with sulphurous anhydride or fortified with alcohol. The wines that are generally made "mute" are white wines that are to be used to sweeten liquors or to increase the sugar contents of new wines, or that are to be used for the manufacture of syrups by concentration in vacuo.

When a wine is made mute by the use of sulphurous anhydride, the risk is run, if too much is used, of giving the wine, first, a taste of sulphuric acid, and afterward more or less pronounced bad flavors due to the sulphates that are formed.

These wines are kept in cool cellars, where the temperature is as nearly as possible constant, and in strong and well-hooped casks. They ought to be clarified, preferably with gelatine. In order to obtain a perfect clarification, about 8 or 10 grammes of tannin are added to each

hectolitre before putting in the finings (one tenth per m., or about 1.25 ounces per 100 gallons).

SMOOTH (*Vellutato, Morbido, It.; Velouté, Moelleux, Fr.*).—A smooth wine fills the mouth with its grateful flavors and fragrance, imparting its delightful series of sensations without the slightest harshness.

This quality is due to the presence of a certain quantity of glycerine, and not to glucose, as at first one might be inclined to think. In this latter case the wine would be called "amabile" (fruity).

It is glycerine rather than glucose which gives a wine that kind of smoothness which might almost be called unctuousity.

In very high-class wines the smoothness or unctuousity is due not only to glycerine, but also to other bodies which have not yet been well studied; they occur more especially in wines of very favorable years; that is, of years when the season has been so propitious that the grapes have been able to attain an exceptionally perfect maturation.

Many chemists have attempted to determine the nature of these substances.

Il Fauré, who studied the wines of the Gironde, believes that this unctuousity is due to the same substance as sève, a substance which is of similar character to pectine and mucilage, and which he called "œnanthin."

Batilliat claims to have found in the high-class wines of Bordeaux the peculiar substance which causes their unctuousity, and which he calls "croatine."

Mülder, on the other hand, from observations made on the wines of the Gironde, considers this unctuous substance as analogous to dextrine.

Whatever may be the nature of this substance, it is useful to know that the wines in which it occurs, if not well kept, are liable to undergo an almost insensible fermentation, which destroys this substance, and so takes away from the wine that quality which is due to it; pasteurizing or heating will also deprive a wine of this quality.

FRUITY (*Amabile, It.; Suave, Fr.; the Latin, Suavis vel subdulcis*).—A wine which is very faintly sweet on account of retaining a small quantity of grape sugar or glucose.

As is said sometimes: "*Quel vinetto; così amabile va giù senza accorgersene.*"

Technically, a fruity wine cannot be said to possess sève because it tends towards sweetness. However, a wine which is very slightly sweet may possess a good sève in the sense that it produces those sensations which are the quality of wines of the highest class.

SWEETISH (*Dolcigno, It.; Doucereux, Fr.*).—A wine is said to be sweetish when its sweetness is undecided, unsatisfactory, and not in harmony with the other components of the wine; it is due usually to a bad fermentation and incomplete defecation, or it may be, with an ordinary table wine rich in mucilaginous substances, that it is becoming sick or undergoing one of those insensible fermentations, that is, the tartaric fermentation, to which such wines are so subject in the spring. In the latter case there is a moment when the wine can be detected in becoming slightly sweetish, and if prompt measures are not taken it will in a short time be completely spoiled. This turning flat and sweetish is due to the mucilaginous substances which, under the action of dilute acids and a favorable temperature, become transformed into substances resembling dextrine and other saccharine matters, which give place, or rather

favor, when the alcoholic fermentation has not been of a thorough character, the development of secondary fermentations.

SWEET (*Dolce, It.; Doux, Fr.*).—A sweet wine is one in which the sweetness is pleasant, because not excessive, and in harmony with the other principal ingredients, and more particularly with the alcoholic contents.

*"Il vino dolce e glorioso
Rende l'uomo pingue e carnoso
E allargo lo stomaco."*

OVER SWEET (*Dolciastro, It.; Douceâtre, Fr.*).—This is said of wines which are too sweet, or in which the sweetness does not seem to be well combined; that is, the sugar seems to have been lately dissolved in the wine.

HONEY SWEET, SICKLY SWEET (*Dolce smaccato, Melacchino, It.; Doux fade, Mielieux, Fr.*).—Of white wines when they are very sweet and of a nauseating sweetness, resembling must more than wine.

Melacchino is perhaps a corruption of *melichino*, meaning cider—*vinum ex malis, pomatum* of the Latins.

NEW OR YOUNG WINE (*Vino giovane, nuovo, It.; Vin jeune, Fr.*).—A wine which has been made but a short time, and which has not undergone those changes and transformations in its composition through which it acquires new qualities, due to the new substances which are formed, and which render it more agreeable to the palate, and in the case of fine wines impart bouquet and even sève.

Another cause of variation in the character of wines is the deposition in whole or in part of various substances on the walls of the cask, or in the form of lees at the bottom, that are thus eliminated from the composition of the wine.

These young wines, compared with their condition at maturity, are more heavily bodied, more deeply colored (green or acid), more astringent, and sometimes rough and harsh.

These wines are, finally, more nutritious than after they become mature; it must not be forgotten, however, that a wine which is too young is somewhat indigestible.

GREEN (*Verde, Verdetto, Bruschetto, It.; Vert, Aigrelet, Fr.*).—Green wine is not synonymous with young wine, as might be supposed at first; greenness is a quality which a new wine may and generally does have.

A wine is said to be green when it has an acidity and roughness which, though pronounced, is of such a character that it will disappear with time.

Thus, incompletely ripened grapes give a green wine, owing to a small quantity of volatile acid and acid salts which they contain, and more especially bi-tartrate of potash.

Greenness is characteristic of certain new wines, and also of many mature wines produced in northern countries.

TART (*Acidulo, Acidetto, It.; Acidule, Aigrelet, Fr.*).—Said of a wine possessing an agreeable and sufficient acidity, due to the presence of free tartaric acid and sometimes of carbonic acid, especially when this latter is in such amount as to become free easily, and so affect sensibly the tip of the tongue.

HARSHLY ACID (*Acerbo, It.; Acerbe, Fr.*).—Expresses a sharp, harsh acidity, like that in sour or unripe fruit, which puts the teeth on edge

and draws up the lips and mouth. This acidity comes from immature seeds or green stems, which communicate their acids, such as malic, racemic, etc., to the wine; in other words, the acid is the same chemically as that found in unripe fruit.*

Wine produced from grapes which for some cause or other have not reached their maturity, are always more or less harshly acid.

With time this repellant acidity disappears, for the reason, according to Dessaignes, that the malic acid, after eight or ten months, decomposes into succinic and butyric acids.†

MATURE WINE (*Vino maturo*, It.; *Vin mûr*, Fr.).—A mature wine is one which has quite developed all its characteristic qualities, and which is therefore ready to be drunk, or to be placed in bottles, where, in aging, it will go on improving.

DECREPIT WINE (*Vino decrepito, passato*, It.; *Vin passé, affiailli*, Fr.).—The caducity of a wine is the stage, according to Dr. Guyot, where it has passed its prime maturity, and when it has already commenced to deteriorate; when, in other words, it has lost some or all of the qualities due to its volatile principles and other constituents.

A decrepit wine has lost its fragrance, has become flat; it has not contracted any disagreeable or repelling flavor, for the taste of *age* that these wines have cannot be called disagreeable in the same sense as a wine which is attacked by the disease called *bitterness*, but it has a slight bitterness which recalls that of some resinous substances.

These wines, when they find themselves in favorable conditions, as when exposed to the air, decompose readily.

"A wine which has been exposed to the cold of winter and the heat of summer acquires in the month of September the taste which Italians call 'settembrino,' which is exhausted and 'passé.'"—M. Salvini.

DRY† (*Vino asciutto*, It.; *Vin sec*, Fr.).—This is said of a wine which leaves in the mouth a sense of dryness. It is a characteristic of highly alcoholic and somewhat astringent wines. "*Pomino* leaves the mouth dry," say the Tuscans. A dry wine is not only without even the slightest taste of glucose, but it does not contain, or only in the most minute degree, the quality of smoothness due to a certain quantity of glycerine, and, in the case of high-class wines, of other substances.

ASTRINGENT (*Aspretto*, It.; *Un peu âpre*, Fr.).—When the tannin is somewhat noticeable.

*This acidity must not be confounded with that due to the acetification of the wine. This excessive acidity may be amended by an indirect method, which is that suggested by Gall, and which aims to correct the must before fermentation. Or some may have recourse to "marmorizzazione;" that is, the addition to the wine of powdered calcium carbonate (marble), which is, however, a method which cannot be very highly recommended, and when necessary, Liebig's method is much to be preferred. This method is to add to the wine a concentrated solution of neutral tartrate of potash in such proportion as to bring down the acidity to the desired degree.

As a preliminary test, to ascertain with an approximation near enough for practical purposes, several quart bottles are filled with the wine to be treated, and to each bottle is added a certain quantity of the solution of neutral tartrate of potash, each bottle being given a slightly greater dose than the one before. The bottles are then corked and left to themselves for a few days. They are then tasted, and the one giving the desired result is used as the basis of calculation for treating the whole quantity.

†The organic acids contained in the must are the following: Tartaric, racemic, malic, citric, tannic, palmitic, stearic, etc.

The acids, on the other hand, which are produced by fermentation, the oxidation of the alcohol, or the breaking up of the sugar, are: Carbonic, acetic, propionic, butyric, valerianic, capronic, cœnantalic, pelargonic, succinic, lactic, etc.

‡This is a restricted use of the term *dry*, somewhat different from its more general meaning, which is simply *not sweet*, that is, containing no glucose.—*Trans.*

ROUGH (*Austero, Pavido, Allappante*, It.; *Austère, Âpre, Picotant*, Fr.).—These terms are used of wines which, on account of their excess of tannin, or rather cœnotannin, are in the highest degree rough and astringent. Their flavor, which is somewhat nauseous, recalls immediately that of ink, or of ferruginous substances.

In drinking a rough, overastringent wine, a feeling of dryness is produced on the tongue and along the œsophagus. The daily use of wines of this character, by persons of delicate constitution, may occasion organic disorders.

This roughness tends to diminish with time, and may completely disappear; the cause being that the tannin, under the influence of oxygen, gives place to a slow formation of carbonic and gallic acids.

Cœnotannin* possesses tonic properties, and insures the conservation of the wine by causing coagulation, and consequently the elimination of many substances which the wine contains, substances whose presence is dangerous from their instability, and because they favor the development of those organisms to which are due secondary fermentations.

High-class and fine wines when young, and even sometimes when old, are more or less markedly rough; this roughness they lose with time.

HARSH (*Duro*, It.; *Dur*, Fr.).—Harsh wines are generally young wines rich in tartar and tannin, and which, consequently, leave a repellant impression on the papillæ of the tongue and palate.

Harsh wines are lacking in delicacy and value.

Harshness, of itself, is a defect; ordinarily it is due to the soil, and in that case the wine is also heavy bodied. This defect may also be owing to unskillful preparation or handling.

Harsh wines keep easily, and can be kept for a longer or shorter time, according to their quality.

*Cœnotannin has the property of forming with gelatine and with albumen voluminous insoluble compounds, which precipitate with great readiness. By means of clarification, therefore, the contents of cœnotannin can be notably diminished, thus curing, or at least considerably lessening, the defect of roughness.

I have called roughness a defect, but that should be understood relatively, not absolutely, for it should not be forgotten that the general trade demands a certain roughness, and wines in which it is lacking are often given this character artificially by the addition of alum, which is undeniably an adulteration, or by the addition of tannin.

Alum is used by unprincipled dealers, and has the quality of reviving the color, precipitating the albuminoids, and imparting a roughness, almost styptic, analogous to that presented by the common Bordeaux wines.

The wine maker has the choice of two kinds of tannin which are found in commerce, and which differ in their mode of extraction or preparation. Thus, the tannin may be extracted from galls by means of ether, giving a tannin pure, but retaining a taste of ether, which renders it objectionable in the treatment of wine. The other kind, which is extracted by alcohol, is inodorous, and therefore preferable for the wine maker.

Pure tannin dissolves completely in alcohol, and in water mixed with 10 per cent of alcohol, and the solution should be limpid. When the wine maker needs tannin he can make use of the grape seeds, which contain a considerable quantity; the seeds may be used either fresh or dry, the latter being more convenient, as they can be preserved from year to year.

It is to be remarked that clarification attempted with isinglass, gelatine, or white of egg, does not always succeed; the failure is due to the lack or insufficiency of tannin in the wine, or to its superabundance.

This explains the common usage of adding tannin to white wines before attempting to clarify them; or in the case of highly tannic red wines why, after adding the clarification, it is often necessary, in order to produce perfect limpidity, to have recourse to sulphuring and racking. This is what the cellarman means when he says that the wine has not taken the finings.

Wines which have fermented slowly, and which contain substances resembling humic compounds, can sometimes be fined even when lacking in tannin.

It is also worthy of remark that tannin has a great influence on the color of wine; it tends to increase it, and, according to M. Nessler, if the wine remains for some time in contact with the lees, it prevents, to a great extent, the diminution of the color.

The life of ordinary or common wines, which are harsh, is limited to a few, two or three, years. These wines in losing their harshness gain little or nothing in value, in fact, as they lose the defect of harshness, they acquire another, that due to tartaric fermentation.

Harsh wines which have good quality and body keep for a long time, and after some years lose their harshness; they thus become more homogeneous, harmonious, and pleasing, or as the experts express it, they become rounded.

If these wines are drunk before they have lost a portion of their harshness, they are not very hygienic.

BITTERISH (*Amarognolo*, It.; *Un pen amer*, Fr.).—This is not a defect; it is even up to a certain point a good quality; that is, when the bitterness is very slight, delicate, aromatic, in short, pleasing; as a rule, a slight touch of bitterness is characteristic of densely colored wines.

Very often this quality is due to the presence of carbonic acid in solution; for example, in young wines or those which have been treated by the Italian method called "il governo."*

Sometimes, in the common language, all wines are called bitter, but with impropriety, which are not sweet; from which the Tuscan proverb, *Vino amaro tienlo caro*, which means, the wine which is not sweet is always of best quality.

BITTER (*Amaro*, It.; *Amère*, Fr.).—Bitterness is a defect, and may be due, as in general it is, to a real malady caused by a micro-organism.

"*L'amertume est pour nous la maladie organique des vins de Pinot.*"—Vergnette Lamotte.

Wines of this kind have a harsh, repelling, nauseating bitterness, due to secondary fermentations, or in the case of young wines, to principles which they have extracted from the skins or stalks during fermentation.

According to M. Nessler the tendency of a wine to this disease is augmented by remaining long in contact with the pomace.

The bitter taste affects principally the posterior portions of the tongue and palate, and the sensation persists for some time.

This fault, which most oenologists consider confined to red wine, is found also, we are told by M. Ottavi, in white wines. He claims to have encountered it in the white wines of Piedmont.

Nessler observes that white wines are less subject to this defect or malady than red, thus admitting, by implication, that they do sometimes become bitter.

The bitter secondary fermentation may develop in any wine, but is more frequent in fine and delicate wines. In common wines the disease usually occurring is the tartaric fermentation.

In general, highly colored wines, rich in extractive matters, are most liable to the attacks of the disease of bitterness.

The high-class wines of Bourgogne, made from the Pinot, not excluding even those made in the most favorable years, are subject to attack by this disease.

In the finest wines Vergnette Lamotte distinguishes two kinds of bitterness: That which attacks the wine during the first two or three years of its life, and which is the most dangerous; and that which shows itself

*"Il governo" is a method of wine treatment in common use in Tuscany, which consists essentially in maintaining a slow, protracted fermentation in a poor or neutral wine by the addition of half-dried grapes of high quality, or containing an abundance of those substances lacking in the wine treated, as color, body, tannin, etc.—*Trans.*

in old and decrepit wines. This second bitterness, due perhaps more to chemical reactions than to the action of ferments, is only relatively an ill, as the wine can be consumed before it reaches complete decrepitude.

Pasteur holds that even this second bitterness, which Vergnette Lamotte lays to the account of decrepitude, is caused by the same organism which determines the first kind.

This organism may remain inert for a longer or shorter period, till in the course of aging the wine presents the necessary favorable conditions for its development.

In conclusion, I will say that the bitter taste is a somewhat serious defect; a defect which may be more or less marked, as it may be transitory or permanent.*

*The bitter taste in wine may be the consequence of imperfect maturity of the grapes, owing either to an unpropitious season, or to the damage caused by insect or cryptogamic pests; or it may be the consequence of a secondary fermentation, caused by a micro-organism, i. e., the "bitter ferment," which determines the formation of those substances which impart this taste to the wine. In the latter case we have a true disease.

When the bitterness is due to the principles which have passed from the grapes and stems into the wine, then with time and successive finings and rackings it will disappear. This is explained by the supposition that the nitrogenous substances become impregnated with the bitter principles, and thus, when the former are precipitated, they carry along with them the latter, the wine in this way losing this defect.

The bitter taste, if very pronounced, may not disappear after the first rackings, in which case the wine should be fined with gelatine or white of egg.

If the wine be weak, the coagulation of the albumen may be facilitated by the addition of alcohol.

According to the quality of the wine, it may be given a light clarification with the whites of three or four eggs per hectolitre, or a more energetic treatment with 25 grammes of gelatine.

Such a treatment not being found sufficient, recourse must be had to the use of olive oil of good quality; of this the dose to be used is one half litre per hectolitre. The oil is poured into the wine, the whole thoroughly stirred, and then allowed to rest; the oil separates from the wine, and carries with it the substances which have caused the bitterness.

Directly after racking a wine with access of air, it will sometimes become slightly bitter; this seems to be caused by the action of the oxygen of the air upon substances contained in the wine; later the bitterness disappears, owing very probably to the rapid oxidation which causes these substances to precipitate. In this way M. Mona explains how bitter wines in bottles can, with time, lose this defect.

Formerly various opinions were held regarding this malady, because, in all probability, people failed to distinguish between bitterness proper and the malady due to tartaric fermentation, or "la pousse."

Thus De Blassis attributed it to changes of the salts, especially of bi-tartrate of potash; Machard to an invisible action of the fermentative principle, decomposing the last remnants of sugar and salts in the wine; Lebeuf to an abnormal fermentation, which produced, sometimes, citric ether, which has a bitter taste; Vergnette Lamotte to a secondary fermentation, caused by a parasitic vegetation, which decomposed the wine in consuming the coloring matter; Neubauer found that the quantity of tannin and of coloring matter diminished with the progress of the malady. Finally Pasteur, after the study of many bitter wines, has demonstrated that this malady is caused by the action of a micro-organism, which multiplies with extraordinary rapidity in the superior wines of the "Côte d'Or," but very slowly in the common wines of Bourgogne, the Jura, and the Bordelais. He adds that this malady presents many diversities in its development, according to the origin and the nature of the wine, but that all wines are subject to it.

Ducleaux, in 1873, determined the volatile acids of bitter wines, the following being the result of his analyses:

	Volatile Acid.	Total Acidity.	Acetic Acid.	Butyric Acid.
Sound wine	1.01 gr.	4.40 gr.	0.97 gr.	0.04 gr.
Bitter wine (1866)	1.50 gr.	5.15 gr.	—	—
Bitter wine (1873)	1.95 gr.	6.67 gr.	1.83 gr.	0.19 gr.

The increase of total acidity in the sick wine being greater than could be accounted for by the formation of acetic acid at the expense of the alcohol, it must be attributed to the fermentation of the glycerine, which, in fact, had diminished.

EARTHY TASTE (*Terroso*, It.; *Terreux*, *Goût de terroir*, *Goût de pierre à fusil*, Fr.).—By the term earthy a single definite taste must not be understood, but divers flavors which are all in general disgusting or bad.

In tasting, these flavors are perceived by the posterior part of the mouth, and may have their origin in the soil, in the use of inappropriate fertilizers, in the plants supporting the vines, or in the weeds infesting the vineyard, etc.

"The earthy taste is a vague term," writes Ottavi, and with justice, for it is a taste which is not always very definite, resembling sometimes earth, manure, flint, slate, nuts, willow, grass, etc. It is well known that *Aristolochia*, *Mercurialis*, etc., if allowed to grow in the vineyard, communicate their flavor to the grapes, and therefore to the wine. Pliny was not mistaken when he wrote: "In general, the vine takes up with an astonishing facility the flavors of neighboring plants. The grapes grown in the marshy soils of Padua have a taste of willow."

Generally the earthy taste is not found in high-class or fine wines. I say generally, because there are exceptions; for example, Chablis has a slight flavor of flint, and yet it is a wine of a certain renown.

Richelieu, speaking to Louis XV of a certain wine of Graves, said: "*Il sent la pierre à fusil comme une vieille carabine.*"

The flinty taste, writes Petit Lafitte, has something vinous and energetic, which exactly recalls the sensation experienced by the olfactory organs when a flint recently struck by the steel is held under the nose.*

The diminution of the glycerine was also pointed out by Pasteur, who, besides, stated that the tartaric acid did not diminish.

As the researches of Fritz have shown, many microbes are able to cause fermentation of the glycerine; thus, under the action of the *Bacillus butylicus* it is transformed into butylic alcohol and butyric acid.

Recently, B. Hass experimented with a view of ascertaining whether the bitter taste was due to citric ether, as Müller and other French chemists had supposed, or to some resinous substance produced by changes of the aldehyde in presence of ammoniacal compositions having their origin in the albuminoid matters of the wine.

By exhausting a wine which was afflicted with the bitter disease, and which he had previously rendered alkaline with ether, he obtained a resin slightly soluble in water, very soluble in alcohol and in acetic ether, insoluble in carbon bi-sulphide, turning brown in contact with the alcohols, becoming greenish with ferric chloride, and having the extremely bitter taste of the diseased wine.

Hass has found by his experiments that the best way of curing a wine afflicted with this malady, is by the use of oxidizing agents. Oxigenated water in small quantities is inefficacious; in larger quantities it destroys the bitter taste, but produces another not less disgusting. The best results have been obtained by aeration.

The wine is fortified by the addition of alcohol till it contains 13 per cent by volume, if of feeble character and liable to acetify. A current of air is then passed through the wine for two hours, and the bitterness disappears completely.

Filtration through pomace or cellulose has an excellent effect, the bitter substance seeming to be removed by physical attraction.

This disease may be said to have several stages. At first the wine is still clear, but less fragrant, duller in color, and with a slight bitter taste. Later it acquires an odor *sui generis*; the bitter taste increases, becoming piquant on account of the small quantity of carbonic acid produced by the secondary fermentation which takes place. Finally it loses its natural color, becoming brownish, with a tendency to blue; there has then taken place a serious change in one of the principal components of the wine—the extractive matter—and the wine has become an undrinkable liquid.

* According to Doussieux, the earthy taste is due probably to the solution and evaporation of a part of the mineral and metallic substances which are found in the soil of certain vineyards.

Petit Lafitte seems inclined to attribute the flinty taste to iron and alumina.

Ladrey, on the other hand, accounts for it by the presence of much silica in the soil, and many analyses show silica not only in the leaves and seeds of the vine, but also in the wine.

Joulié states that the flinty taste is due to the fact that pyroniac silica contains a bituminous substance of organic origin, the peculiar taste of which is communicated to the wine.

It should also be remembered that the experiments of Thenard prove that silicate of lime is much more soluble in water than was formerly believed.

According to the experiments made by Aubergier, the principle to which wines owe their earthy taste is found neither in the seeds nor in the stems, but in the skins of the grapes. From 15 kilogrammes of pomace he extracted 30 grammes of a volatile oil so acrid and penetrating that a single drop was sufficient to infect 10 litres of the best brandy.†

This fact supports the opinion of those who see in the prolonged contact of the wine with the pomace the cause of the earthy taste.

Certainly, by improving the soil, by the use of proper fertilizers, by a good defecation of the must, by a prompt removal of the wine from the pomace, by clarification and rackings, the taste under discussion is much diminished, and sometimes completely eliminated.

TASTE OF SOIL (*Sa di terra*, It.; *Goût de terre*, Fr.).—When the wine has that taste of soil or of clay, due to the presence of soil in the must during fermentation. The soil in the must may come from the skins of the grapes, which may easily become covered with it when the bunches lie too close to the ground, or may have become mixed with the grapes accidentally or by carelessness.

This taste may come, also, from the clay which the peasants sometimes use as cement to close the leaks in tubs, vats, or other utensils.

TASTE OF BRINE, SALT (*Sa di salmastro*, *di salso*, It.; *Goût de saumâtre*, *de salé*, Fr.).—The wine has sometimes the taste of common or culinary salt.

This defect is found in wines grown in soil rich in salt, or in localities near the sea.

COOKED TASTE (*Sa di cotto*, It.; *Goût de cuit*, Fr.).—If the wine has a taste more or less pronounced of must or caramel, due generally to the action of fire upon the must when the latter has been concentrated carelessly, or by direct heat.

This taste is caused, also, by an over-maturity of the grapes, as happens in very hot weather, and especially when the grapes are thick-skinned; it may be caused, also, by frozen grapes, or by the freezing of the wine; in the latter case especially when the pieces of ice formed in the wine are not carefully removed.

RESINOUS TASTE (*Sa di resina*, It.; *Goût de resine*, Fr.).—This taste is found in wines which have been kept in receptacles made of resinous wood.

BREAD TASTE (*Sa di pane*, It.; *Goût de pain*, Fr.).—Some sweet liquor wines have an agreeable taste which reminds one of the odor of fresh bread.

TASTE OF DRUGS, MEDICINAL TASTE (*Sa di droghe*, It.; *Goût de drogues*, Fr.).—A taste due to the addition of some infusion or drug to the wine.

Regarding the quantity of silica contained in wine, we have the analyses of Boussingault, who, in analyzing his wine grown at Smalzberg (Bas Rhin), found 6.096 gr. of silica per 1.870 gr. of ash in a gallon of wine, 5 per cent of the mineral ingredients.

Grasso, in the ash of four different musts, found the following quantities of silica:

Petit Bourgogne (not mature)	1.991 per cent.
Petit Bourgogne (mature)	2.099 per cent.
Petit Bourgogne (mature, but from a different soil)	1.191 per cent.
Grün Sylvaner (white, mature)	2.181 per cent.

In the skins the proportion was greater; in those of the first it was 3.464, and 2.571 in those of the fourth.

† That a drop of this oil is capable of infecting so large a quantity of brandy is not wonderful, when we reflect on the sensibility of our organism, especially of our sense of smell, which is so susceptible as to surpass the extremely delicate spectroscope. Thus, for example, Valentin has shown that one five hundred thousandth of a milligramme of sulph-hydric acid, or one two millionth of a milligramme of essence of roses, is sufficient to make an impression on our olfactory organs.

BURNT TASTE (*Sa d'abbruciato*, It.; *Goût de brûlé*, Fr.).—When the wine has a flavor of acrid fruit, together with a spurious cooked taste.

The taste of which we speak is a consequence of the partial withering of the grapes before their maturity, on account of extreme heat or of great changes of temperature between night and day.

MOUSEY TASTE (*Sa di topo*, It.; *Goût de souris*, Fr.).—A wine will sometimes have a disgusting flavor and odor that recalls forcibly the odor of the excrements of mice. The cause of this defect is not well known. According to some authorities, it is due to lack of cleanliness in the receptacles in which the wine is kept. Others believe it to be caused by the action of the oxygen of the air on the extractive matter of the wine, for there seems sometimes to be a distant analogy between the mousey taste and the fresh bread taste so much appreciated in some liquors. It is very probable that both of these causes concur to produce this taste, for it is found sometimes even in wines which have been kept in glass.

The mousey taste may be more or less intense, and wines affected produce a dry feeling in the mouth when they are tasted. If a wine has this taste in a very slight degree it is not noticed immediately; it often happens that after passing judgment on a wine, one's opinion has to be modified by a mousey taste which is not perceived at first. If the defect is pronounced, it is perceived immediately by the nose; the odor and taste too, in this case, are so disgusting as to be sickening.

HEATED TASTE (*Sa di riscaldato*, It.; *Goût de réchauffé*, Fr.).—This unpleasant flavor is hard to define, as, in fact, it is a mixture of various flavors—of acetic acid, of stems, of organic matter slightly decaying under the influence of heat and moisture, etc.

This taste is easily produced by allowing the cap to become overheated during fermentation, or by heating grapes before crushing them.

With time this taste tends to disappear, but when somewhat pronounced it diminishes, leaving the wine with a somewhat acrid taste.

SULPHUR SMELL, or better, **SMELL OF SULPH-HYDRIC ACID**.—An odor resembling rotten eggs which a wine may have, and which is due to the presence of sulph-hydric acid or sulphuretted hydrogen.*

TASTE OF STALE EGGS (*Sa di uova stantie*, It.; *Goût d'oeuf gâté*, Fr.).—This taste, which is easier to avoid than to cure, comes from the use of eggs not perfectly fresh for fining.

ODOR OF SULPHUROUS ACID, OR OF SULPHUR VAPOR.—A wine often has the odor characteristic of this substance when it has been recently racked into an excessively sulphured cask.

As every one knows, things that are useful when used in moderation become dangerous when used in excess. This is the case with sulphurous acid.

* It is generally held that the cause of the formation of sulph-hydric acid in the wine is the presence of sulphur in the fermenting mass, as happens when the vines have been sulphured in such a way as to allow sulphur to adhere to the grapes. This is indeed the principal cause, but not the only one. Nessler cites six of these causes, which are: The sulphuring of the vines; the sulphuring of casks; the use of sulphur tape; the use of certain fertilizers; the cultivation of the vines in certain soils; the presence of iron in the vats or casks.

To these causes, most probably, should be added another, that of the reduction of sulphates by micro-organisms, a reduction first noticed by Planchud, who attributed it to vital action. This action has been found by Etard and Olivier to be due to algae of the group of oscillators, called *Beggiatoa* (*B. roseo-persicina*, *B. mirabilis*, *B. alba*). Other algae of the genus *Ulothrix* have the same property.

Is it not possible that micro-organisms might be found in wine resembling and acting in the same way as these algae found in sulphurous waters?

The fine experiments of Dubœuf and J. Bruhl on the action of sulphurous anhydride, or acid, on micro-organisms, have an important bearing here.

They have deduced from their experiments the following conclusions:

1. Sulphurous acid gas has an evident microbicidal action on the germs contained in the air.

2. This action is especially perceptible when the air is saturated with water vapor.

3. Sulphurous acid acts particularly on the germs of bacteria.

4. Pure sulphurous acid will destroy germs, even in the dry state, if the action is sufficiently prolonged.

Sulphurous acid, when used in excessive quantities, takes away from the quality and color of the wine, and gives it a bitterish, astringent, and displeasing taste. In time the sulphurous acid changes to sulphuric, and then into sulphate of potassium. This is why in many wines is found a certain quantity of this sulphate, which is dangerous to health, and, when sufficient of it is present, would lead to the belief that the wine had been plastered.

At the end of the last century it was shown that a wine sulphured to excess acquired a very disagreeable odor, and was hurtful to the health, causing headache, vertigo, oppression of the stomach, nausea, etc.

In practice it is good to remember that the more alcoholic a wine the more sulphurous acid it will dissolve or absorb.

Nessler, making a comparison of water and wine at 9 per cent of alcohol, filled a barrel quickly with each, after having burned as much sulphur as the air in the barrel would consume, and found that the water absorbed .01035 per cent of sulphurous acid, and the wine .01346 per cent.

The quantity of sulphurous acid which a wine will absorb in process of keeping cannot be exactly stated, as it depends on the number of sulphurings, the amount of sulphur burned, or, when the sulphur is burned directly in the cask, on the amount of oxygen there.

According to Weigert the quantity of oxygen in a cask of one hectolitre is 21 litres or 30 grammes. By burning an equal quantity of sulphur 60 grammes of sulphurous acid are formed. When the cask is filled all this is not dissolved, because part is oxidized immediately, and part escapes into the air as the wine enters the cask; thus, the total amount absorbed by the wine is reduced to about 10 or 11 grammes.

VARIOUS ODORS (*Violet*, *Rose*, *Mignonette*, *Pink*, *Bitter Almonds*, etc.).—These are all odors given artificially to the wine to render it more fragrant, or to attempt to pass it off as a wine of higher quality than it really is.

Many high-class and fine wines, in aging, develop characteristic bouquets; but besides bouquet these wines have *sève*, which artificially perfumed wines lack altogether or have little of in proportion to their fragrance.

Besides the odors which we call good, which have been added artificially, we have also bad odors which are absorbed from the air by the grapes or the wine, such as the odor of tobacco, of grass, etc.

WOOD TASTE (*Sapor di legno*, *Asciutto*, *Sa di secco*, It.; *Saveur de bois*, *Seche*, *Goût de sec*, Fr.).—A taste not easily defined, as it lies somewhere between that of wood and of mold. It is communicated to the wine by ill-kept casks which have become "*secco*, *asciutto*," a defect seeming to

be due to the development of mold in the inside of the cask. Sometimes wine will acquire this taste when left long with ullage or in imperfectly closed casks.

To remove this taste recourse is had to olive oil, lemons, or refermentation with a small quantity of fresh grapes.

"*Se egli sappia di secco, il vino, vi abbia odor cattivo, caccinvisi dentro fiaccole acuse, e vi si spengano.*"—Soderini.

TASTE OF THE STEMS.—This is a rude, unpleasant taste, vulgarly known as a taste of "legno verde" (green wood). It is found in wines which have been allowed a too prolonged contact with the stems, or which have been made by a maceration of the whole bunch, or which have been made from bunches not perfectly sound. The taste of stems is generally accompanied by some bitterness.

Clarifications and rackings with contact of the air will often destroy or notably diminish the stem taste.

When it is desired to prolong the contact of the wine with the pomace, stemming is to be recommended.

SMOKY TASTE.—This taste resembles the smell of burning wet or green wood. It is, writes Mona, somewhat acrid and bitter, recalling smoke and soot. According to Mona, it is found more rarely in Italian wines than in German.

This defect may be occasioned by the smoke given off by ill-constructed stoves used to heat the fermenting-room or cellar; or it may be due to unfavorable climatic conditions during the vintage.

It has been stated that musts corrected by the addition of cane sugar will sometimes give wines with this taste.

With the smoky taste a wine loses its brightness, becomes cloudy, and if not cured by sulphuring, changes into a liquid not to be tolerated by even the most uncritical palate.

OAK TASTE.—A taste which a wine will contract after two or three rackings into new casks which have not been properly prepared, especially if they are made of a bad quality of wood. The wine in this case acquires a peculiar, bitterish taste, according to Ottavi, almost aromatic, much tannin, and often the real flavor of the wine is quite destroyed.

TASTE OF MERCAPTAN.—The repugnant taste and odor of onions or garlic, which remains even after the wine has been racked into well-sulphured casks.

The same causes which tend to produce hydrogen-sulphide in the wine, not excepting plastering when it is done heavily, tend also to form mercaptan. So far no means have been discovered of removing this taste from wine.

Polacci was the first to observe the formation of these products, which have a fetid and persistent odor, and are due to the action of sulph-hydric acid and sulphur on the components of the must and wine; he believes them to be simply ethylic mercaptan. König thinks that this reaction is not very probable, as it has never been known to take place in a dilute acid solution. He believes, on the contrary, that the aldehyde contained in most wines combines easily and directly in a dilute acid solution with sulph-hydric acid to form thio-aldehyde and trithio-aldehyde. Now these compounds are endowed with a strong, persistent, and disagreeable odor, resembling closely that acquired by wines containing sulph-hydric acid; it may be, therefore, that the mercaptanic

substance spoken of by Polacci is nothing but thio-aldehyde or trithio-aldehyde.

TASTE OF LEES.—Wine, by a prolonged contact with the lees, loses its clean taste and acquires a more or less pronounced bitterness, which has a distant resemblance to a taste of decay, and is characteristic of lees even when sound.*

TASTE OF DECAY (*Sapore di fradicio*, It.; *Saveur de pourri*, Fr.).—A taste which the wine contracts from unsound cooperage or too prolonged contact with the lees; it is a repelling taste of rottenness, which, however, must not be confounded with that caused by putrid fermentation of the wine.

This taste may also originate in imperfectly ripened grapes, which, through the prolonged action of dampness, have commenced to decay.

If the grapes are ripe before they commence to decay, the wine will still have something of this taste, but it will be less disgusting and will tend to disappear with time; the wine will, however, always be insipid, and lack frankness of taste.

MOLDY TASTE.—The characteristic taste of mold. Wines easily contract this taste, either from moldy casks or from moldy grapes having been used. It is generally possible to take away this taste by the use of olive oil.

Sapore di tempesta, It.; *Saveur de grêle*, Fr.—A harsh, bitterish, somewhat moldy taste, perceived in wine made from grapes that have been injured by hail at the commencement of their ripening.

RANCID (*Rancido*, It.; *Rance*, Fr.).—"When the wine is swallowed, or whilst it is being drunk, a displeasing taste is noticed in the throat and slightly on the palate, almost analogous to that of rancid substances, from which comes the name given to this disease of wine, till now unstudied by any author. The *rance* can also be smelt, if it is pronounced, but a good nose is needed to discover it, and a delicate palate to taste it, at its incipency."—O. Ottavi.

FRUITY TASTE† (*Sapore di frutto*, It.; *Saveur de fruit*, Fr.).—Many young wines, when well made, have a very pronounced taste of fruit.

Common wines, with age, lose this taste, but fine, and above all, the finest, wines retain it, much to their advantage; they retain it, however, only when aged slowly, and without the use of artificial aids.

TARTARIC FERMENTATION.—This term is used to cover two different maladies of wine caused by two micro-organisms, which differ somewhat from each other, and the products of the fermentations caused by them differ considerably. These maladies, however, have a certain affinity, since both the micro-organisms, to whose action they are due, live at the expense of the tartaric acid in the cream of tartar.

The French distinguish these two maladies, calling the first "*la maladie de la pousse—vin poussé*," in Italian, "*malattia del subbollimento*;" and the second, "*maladie de la tourne—vins tournés*," in Italian, "*cercone*."

* It may perhaps be useful to note that the lees may become the seat of a bacteroid fermentation independently of any anterior disease in the wine. Thus, according to the experiments of Ravizza, the wine and lees may become the prey of bacteria without the aid of molds or other micro-organisms that destroy the acids.

The temperature most favorable to the development of bacteria in the lees seems to be from 77° F. to 86° F. Below 77° F. the phenomena accompanying the life of these bacteria decrease, and towards 50° F. cease altogether. The practice, then, in racking, of separating the last layers of wine, that is, the part lying in contact with the lees, from the rest is a good one, and this wine may be considered of inferior quality, either because it lacks a clean, fresh taste, or because it is sometimes cloudy.

† Fruity is very often used in English with the inappropriate meaning of somewhat sweet.—*Trans.*

"*Maladie de la pousse*."—This disease is recognized by the wine spurting out when the vessel in which it has been confined is opened; the wine exercises a strong pressure on the staves of the cask on account of the carbonic acid which is formed; it is from this that comes the term "pousse."

In the glass the wine shows a persistent ring of small gaseous bubbles of a whitish color. If the wine is left exposed to the air it becomes turbid; its color becomes dull with a tendency to yellowish.

The wine has lost its primary flavor, and as the disease progresses, becomes more and more insipid; if it is shaken there is an appearance of silky waves at the surface, caused by the lees which has risen up.

Balard was the first to show the presence in "vins poussés" of a ferment which, according to him, resembles the lactic ferment. He has further shown that in these wines the quantity of volatile acids is increased, the one found in largest quantity being acetic acid.

Bechamp and Sténard have shown that propionic acid is formed in these wines from the tartar and the glycerine. Nicklés, on the contrary, is of the opinion that metacetic acid is produced.

Duclaux, who has given much attention to this malady, seems to have proved: (1) That the amount of free acids augments with the progress of the malady; (2) that this increase is made at the expense of the fixed acids of the wine, particularly of the tartaric acid; (3) that the acids formed are propionic and acetic. After having shown this he concludes by saying that all fermentation of the tartar that takes place with the evolution of pure carbonic acid and production of propionic and acetic acids should be called "*maladie de la pousse*."

Cercone, vin girato, mercuriella, It.; Tourné, vin tourné, vin qui a donné le tour, Fr.—At this word in an Italian dictionary is written: *Cercone*—a distiller's term—is said of a spoiled wine, because in becoming thus it works and turns; *vappa, lora* of the Latins. The *lora* of the Latins is certainly not the *cercone*, but *family wine, piquette*; neither is *vappa*, since that, according to the dictionaries, should indicate a flat, vapid wine. *Vappa vinum insipidum et nullino virtutis, postquam omnino odor saporque optimus evaporavit.*

Vin tourné has this peculiarity, that when first poured out it appears sound, but after a short time it tends to become turbid and iridescent.

Under the influence of the oxygen of the air the coloring matter becomes purplish, and precipitates, and the wine acquires a yellowish tint, a sour taste, and a forbidding bitterness.

Wines of this kind when distilled give a brandy having a bitter taste, caused probably by ammoniacal compounds. The alcohol made from them has not always, but often, a strong and pungent odor, and cannot, without being well rectified, be put to the ordinary uses of wine alcohol, that is, the manufacture of vermouth, etc. This odor is sometimes so pungent as to bring tears to the eyes, and, by fractional distillations, it is possible to isolate a certain quantity of croton-aldehyde.* This compound is formed, very probably, during the distillation by the condensation of the aldehyde with diminution of water.

Balard has found lactic acid in "vins tournés;" Glenard, on the other

*Recently Professor Comboni, in distilling a wine made by blending Marzemino and Black Pinot, which had been attacked by the bitter fermentation, found in the distillate a considerable amount of aldehyde and formic acid. These products are certainly formed during the progress of the secondary fermentation, for they are not found at all in the same wine when sound.

hand, has found potassic acetate. In the secondary fermentation of "vins tournés," there is a formation of acetic acid, and more especially of lactic and tartronic acids.

A wine attacked by this disease may be considered as lost; however, at the start it may be useful to try the addition of tannin and cream of tartar, then pasteurization and fining. The disease, if not arrested, is followed by putrid fermentation.

PUTRID FERMENTATION.—This disease attacks the organic matter in the wine, destroys it, and gives rise to repulsive tastes and odors.

In the incipency of this fermentation, the repulsive odor and taste are not very marked, and a cure may be attempted by heavy sulphuring, followed by filtration through charcoal, which acts as a disinfectant.

FAT (*Grasso, It.; Gras, Fr.*)—I will say now that this defect should not be confounded with that of viscosity or greasiness, though at first view it might be supposed to be the same in a moderated form.

The defect of "fatness" is rarely found in generous wines, but is usually confined to weak ones, and is not due, like "greasiness," to a fermentation, but to the presence of a certain amount of albuminoid substances, of gum, mucilage, imperfect sugars, etc., which impart to the wine a character which, when it is tasted, leaves a more or less marked impression of something glutinous; an impression which persists for some time, leaving, as it were, a pasty feeling in the mouth.

"Fat" wines are indigestible, and hard to keep during the hot season, as they are extremely liable to secondary fermentations. The wines in which this defect is usually found, are those grown on moist plains, which are naturally fertile, or made so by the addition of nitrogenous manures, as, for instance, young vineyards where the effect of manuring at the planting of the vines has not worn off.

This defect may be avoided entirely, or to a great extent, by a thorough and prolonged aeration of the must, or by the addition of alcohol or tannin* to the wine.

Sometimes this defect, when not too pronounced, will partly or wholly disappear after the wine has gone through its slow spring fermentation.

GREASY, VISCOUS (*Filante, Grasse, It.; Filante, Graisse, Fr.*)—Terms used of a wine which has lost part of its fluidity and which, when poured into a glass, falls without noise, or like oil; it has that viscid, mucilaginous look which reminds one of white of egg.

This malady is caused by a micro-organism. A greasy wine, as the malady progresses, loses its fragrance and becomes bitterish; its color becomes dull and tends to turn brown; finally, it loses its natural transparency and brightness. At first it is flat, vapid, and distasteful; and finally, rancid and sour by the formation of lactic acid.

*The addition of a little tanninized wine is better than the direct addition of tannin. Tanninized wine may be prepared thus: Take a small cask, holding, for example, about 25 gallons; fill it with a strong wine, or one made so by the addition of 1 or 1½ gallons of alcohol of 94° C.; into the wine put about 35 pounds of grape seeds which have not been fermented. For the first few days the wine should be stirred from time to time, and then left to itself. After about ten days the liquid part is drawn off, and is then a wine heavily charged with tannin, which serves excellently for the purpose above noted; for that purpose a dose of 1 or 2 gallons of the tanninized wine to 100 of the wine to be treated is about the right proportion.

If a tanninized wine is needed for the defecation of the must, it is prepared thus: Take 5 gallons of alcohol and 10 gallons of wine, put in a small cask, and add about 18 or 20 pounds of seeds, and treat as in the former case; 1 or 2 gallons of this is sufficient to thoroughly defecate 100 gallons of must.

If fresh seeds are not to be had, dry ones may be used, providing they are in good condition, that is to say, providing they have been dried in the shade, kept in a dry place, and have not become moldy.

This malady occurs oftener in white than in red wines; in late years, however, it has been found often in red wines on account of the unfavorable conditions for the grapes attaining a complete maturity, such, for instance, as the damages done by insects, cryptogams, and bad weather. It occurs easily, too, in red wines made from grapes grown on very fertile soil rich in albuminoid substances.

Very probably this deterioration is much more complex than is usually supposed.

Peligot was the first to establish the presence of a micro-organism, of a bacterium. Pasteur, later, demonstrated that this bacterium has the property of transforming the sugar that remains in the wine into a mucilaginous or viscid substance.*

Béchamp calls the active ferment of this process *Micrococcus viscosus*, and the gum which is formed *viscosio*.

Tannin and alcohol, in certain proportions, prevent the development and action of this bacterium; the conclusion, therefore, is that wines poor in alcohol and tannin, and containing sugar, are subject, especially if white, to become "filant." This explains also the use of tannin, as proposed by M. François, of Chalons, to arrest or prevent this malady.

François attributes this malady to a peculiar nitrogenous substance, gliandin, a kind of glutin, which seems to have the property of being precipitated by tannin. Nessler affirms, however, that we do not know yet how the tannin acts.

I have already remarked on the complex nature of the malady under discussion. Usually it is held to be owing to a lack or deficiency of tannin. This, however, is not invariably true, since Francisco Selmi has found it in wine made from Lambrusca grapes, and therefore rich in tannin. It seems that in this malady the tartaric acid also suffers changes. Probably on account of these changes Bizzari proposes the use of tartaric acid, 200 to 250 grammes per 100 gallons, as a cure or preventive of the malady.

*The bacterium of "La Grasse" put into a solution of sugar containing albuminoid and mineral substances acts upon the sugar and transforms it into a kind of gum, mannite, water, and carbonic acid. Thus, 100 parts of cane sugar will give 50.09 parts of mannite, 43.5 of gum, besides water and carbonic acid.

Monoyer proposed to account for this transformation by two chemical equations, the first of which would give mannite and carbonic acid, the second gum and water, as formed from the glucose.

Schmidt-Mülheim is about of the same opinion, he believing that the viscous fermentation consisted of two processes, the first of which gave mannite and carbonic acid, and the second the viscid substance.

Kramer has studied this ferment. He examined three wines afflicted by it, and besides *Saccharomyces ellipsoideus*, *Saccharomyces mycoderma*, etc., he found an extremely minute bacillus 2 to 6 μ long, and .6 to .8 μ thick. He failed to cultivate this bacillus on potato, agar agar, etc., but by putting a little of the infected wine into a new (three months) white sterilized wine and with 3 per cent of glucose, he found that the bacillus developed well and rendered the wine "filant," but only when the air was completely excluded by covering the wine with a layer of oil. With access of air there was very little development of the bacillus, and instead an increase of the other ferments of the wine. Kramer has called this ferment *Bacillus viscus vini*.

The peculiar kind of gum produced by the viscous fermentation of the sugar renders the wine viscid and glutinous. In its properties it resembles dextrine more than it does gum arabic.

The viscid substance, according to Kramer, appears to be a product of assimilation of the organism, whilst the carbonic acid and mannite, which are formed contemporaneously, are products of the fermentation; a constant proportion between the first and the last substances does not exist.

The bacillus multiplies very well in its own viscid product.

The gum can be isolated and purified by precipitation with alcohol, dissolving the precipitation with water, and re-precipitating with alcohol. Dried at 100° C., it forms a brown, amorphous body, which in water, without being dissolved, swells up greatly and forms a kind of glue. It has no acid reaction.

The best means of preventing or arresting the disease consists of the use of tannin, pasteurizing to destroy the bacteria, racking into sulphured casks, and finally the addition of alcohol to the wine.

Pasteurization is inapplicable in the case of white wines which are destined for the fabrication of champagne, because it not only destroys the bacteria, but also the alcoholic ferments, whose action is necessary to produce the carbonic acid, which renders the wine sparkling.

At the beginning of the development of the disease, forcible agitation of the wine will restore its clearness and fluidity by the disassociation of the bacteria and the dispersion of the mucilaginous matter which envelops the parasite.

Agitation, however, must not be looked upon as a curative measure; the results obtained are only temporary, for the cause of the disease, viz.: the bacterium, is neither destroyed nor removed.

FLAT, WINE FLOWERS (*Vino svanito*, *Svaporato*, *Fiorito*, It.; *Vin evanoui*, *Évaporié*, *Fleuri*, Fr.).—A wine becomes flat when it remains for some time exposed to the air, as happens in an imperfectly filled or badly bunged cask. In time it becomes covered with "wine flowers," which consists of the *Saccharomyces vini*, or *Mycoderma vini*. In either case the wine gradually acquires an unpleasant, somewhat bitterish taste, and loses its strength and bouquet by evaporation, or else the breaking up of the alcohol into water and carbonic acid. This has been called by some one, on account of the products formed, hydro-carbonic fermentation, and is caused by the *Mycoderma vini*, which attacks not only the alcohol, but very probably the ethers, succinic acid, and glycerine, as these bodies tend to disappear.

Although cases do occur in which generous wines are attacked by the *Mycoderma vini*, still it has a decided preference for young and feeble wines. In old and well-defecated wines it develops with difficulty, perhaps because in these wines the elements necessary for its nourishment (nitrogenous bodies and phosphates) are not found.

The practice of some wine makers with regard to "wine flowers" is not in accord with that of those who follow a rational system of wine making. They consider only the development of the "flowers," which they look upon almost as a preservative of the wine, whilst the others sustain the necessity of energetically combatting and preventing the increase of the "flowers," because it is not only dangerous in itself, but is almost always accompanied by the *Mycoderma aceti*, or *Diplococcus aceti*, which, the moment circumstances become favorable, commence to replace the *Mycoderma vini* and cause the acetification of the wine.

When it is thoroughly understood how the "flowers" act it is easy to explain the facts put forward by those who do not consider it dangerous, and also the reasons of those who believe that it should be prevented by all means, and destroyed on its first appearance.

The presence of the "flowers" causes such an absorption of oxygen and development of heat and carbonic acid, as to prevent the growth of any other organism.

Ducleaux has calculated that 80 grammes of alcohol contained in a litre of wine of 10 per cent, needs for its transformation into water and carbonic acid more than 160 grammes, or 100 litres of oxygen.

The conclusions to be drawn from this are evident; they are, that when the cask is well closed, so as to prevent the free entry of air, the diminution of alcohol, caused by the "flowers," is reduced to a mere

trifle, and that the presence of the "flowers" excluded the action of other micro-organisms.

We must not, however, reason from this that the *Mycoderma vini* is really of use, for if exposure to the air should happen, if, instead of remaining white, the "flowers," as Pasteur noticed, should turn red, then, sooner or later, it will cede its place to other organisms, to the vinegar *diplococcus*, which, as I have shown before, is ready immediately to commence action, finding itself in favorable condition for its development, for the "flowers" itself serves for nutriment; and if there should be a considerable rise in temperature, the conditions are the best possible.

The final conclusion then, plainly is, that the "flowers" should be carefully guarded against; this is done by the strictest attention to "filling up," the importance of which was recognized by the poet Alemann, when he wrote:

*Che nulla cosa
Può medicar il vin, che resta scemo.*

The "flowers" may be destroyed by the addition of sulphurous anhydride or a few drops of alcohol.

With wine in bottles, the development of the "flowers" is prevented by keeping the bottles lying down; if instead the wine is kept in flasks ("fiaschi"), as in Tuscany, or in demijohns, a few drops of the purest olive oil on the surface of the wine will have the same effect.

SOUR, PRICKED, ACETIFIED (*Vino che ha preso il fuoco, Lo spunto, La punta, Il portore, Vino acetoso, It.; Vin qui a pris le fen, l'Aigre, Fr.*).—Acetic acid is one of the normal components of wine. It is formed during the alcoholic fermentation, but in such minute quantities as to be imperceptible to the taste. When the proportion of this acid, from one of the many known causes, becomes large enough as to be perceptible, then the wine is said to be "pricked."

A pricked wine retains its natural color and limpidity.

This defect is recognized by the odor and taste of acetic acid; in tasting, its strongest effect is perceived at the base of the tongue.

If a wine thus affected is not taken in hand immediately (and in truth success is not always sure) and treated with heavy sulphurings or pasteurizing, it soon becomes sour and acetic.

Acetification is due to the action of a micro-organism, the bacterium known under the name of *Diplococcus aceti*, still commonly called *Mycoderma aceti*, which increases with a rapidity truly prodigious. Ducleaux tells us that if on a surface of wine a metre square an almost imperceptible amount of these bacteria is allowed to fall, in twenty-four hours the whole surface of the liquid will be covered with a layer of them so closely placed as to be crowded into contact. Thus, there will be three hundred thousand million individuals formed in twenty-four hours.

The rapidity with which the acetic bacterium multiplies explains why a pricked wine, when the temperature is favorable, becomes so quickly completely acetified.

It should be remembered that whilst it is easy to prevent this disease by taking proper precautions in the fermenting-room and cellar, it is difficult, if not impossible, to destroy it when started.

Once a wine has become pricked, instead of trying to effect a cure, it is better to follow the advice of Guyot, who says:

"When wine acquires the odor and taste of acetic acid, it is sent to the vinegar factory, but it is never attempted to use it as wine."

All the means that have been suggested for the treatment of a pricked wine may be considered as palliatives only, and not as radical cures. In this regard Carpené writes very justly:

"The neutralization of the acetic acid, which has developed in the wine by the oxidation of the alcohol with potash, soda, lime, magnesia, and their simple or double neutral carbonates and tartrates, seems to be a rational method, but, in reality, is not so. These substances neutralize wholly, or in part, the free, and even the combined acids, and the diminution of the complex acidity of the wine renders the acetic taste less noticeable, but does not completely remove it. To remove entirely the acetic acid it is necessary to completely neutralize the wine, because the acetic acid combines with the alkaline and earthy-alkaline bases after they have neutralized the tartaric, malic, and succinic acids. Moreover, acetic acid, even when completely combined with a base, gives out, though less strongly, its characteristic odor, so that even after complete neutralization the wine will still have an odor of acetic acid, accompanied besides by a bitter taste, which lingers in the throat, and may be worse than the first fault."

MILK-SOUR, LACTIC ACID.—This, by inexperienced tasters, is easily confounded with pricking or acetification.

A milk-sour wine has a more disgusting, biting, and penetrating acidity than an acetic wine, a harsh acidity, whose effect is felt long after the wine is swallowed. An acetic wine has a noticeable odor of vinegar, whilst a milk-sour wine emits an odor of rancid butter, due to the butyric acid which almost always accompanies lactic acid.

If there is any doubt as to which acid the wine contains, the doubt can be solved by pouring a drop or two of the wine into the palm of one hand, and then rubbing it with the other; if any acetic acid is present its odor will be immediately perceptible on the hands.

A milk-sour wine loses some of its fluidity, and its color becomes dull.

Sweet, badly defecated wines, especially those rich in albuminoids, are liable to milk-sourness.

The disease appears during the winter or in the spring, and generally in wines poor in acids; it is accompanied by a turbidity of the wine and a change of color. As long as the wine remains in full, well-bunged casks, this turbidity and change of color do not occur, but only when it is exposed to the air.

Some observers have considered lactic acid as one of the normal products of alcoholic fermentation, like glycerine, succinic acid, etc.; the truth, however, is, as Pasteur has proved, that whenever the smallest quantity or trace of lactic acid is found in wine it is caused by lactic fermentation.

Whenever the alcoholic fermentation of certain musts, rich in nitrogenous matters, is not well conducted, especially as regards temperature, a certain quantity of lactic acid is very easily formed, which is a bad defect. This happens generally in certain years in warm countries, where the so-called sweet-sour wines are produced.

It is difficult, not to say impossible, to take away the defect of milk-sourness; the different methods proposed, including that of refermentation, do not succeed; consequently, the best thing is to prevent it by a thorough defecation of the must, and a properly regulated fermentation, not allowing the temperature to rise to a point at which the alcoholic ferment becomes inactive, and thus preventing it from reducing all, or the major part, of the glucose contained in the must.

SUPPLEMENTAL REPORT

OF

C. J. WETMORE, CHIEF EXECUTIVE OFFICER,

INCLUDING HIS TRANSLATION OF

NEW RESEARCHES UPON THE RESISTANCE OF, AND THE EXEMPTION
FROM, PHYLLOXERA.

By A. MILLARDET.

SUPPLEMENTAL REPORT OF C. J. WETMORE,

Chief Executive Officer.

SAN FRANCISCO, September 15, 1892.

To the Board of State Viticultural Commissioners:

GENTLEMEN: I herewith submit the following supplemental report as Chief Executive Viticultural and Health Officer.

Respectfully,

C. J. WETMORE,
Chief Executive Officer.

OUR MARKET IN ENGLAND.

During the past few years our still and sparkling wines have obtained a good foothold in the English market, and the prospects are that we will soon be able to dispose of a large quantity of our best wines in that country.

Up to the present year, Mr. Edward J. Howell, the London correspondent of this Commission, has always informed me that our wines could never be sold in England. When he called on me this year, he told me he had changed his mind about our wines, for during the past year he had found them served in many hotels and clubs in London, and that they were giving good satisfaction. I then requested him to write me an article for publication on the subject, which he kindly did. The following is his communication to me:

16 MARK LANE, LONDON, August 9, 1892.

CLARENCE J. WETMORE, *Chief Executive Officer Board of State Viticultural Commissioners, San Francisco:*

DEAR SIR: In response to your inquiry for information respecting prospects for realizing on Californian wines in the London market, permit me to say that what I have now to report is of a more favorable nature than my former answer to your inquiries.

The changed conditions for such realization are owing to certain facts, which I will explain.

When I advised you not to look to the European market as an outlet for Californian wines, the conditions were such that you would have had an unprofitable struggle against a long-standing prejudice for a pure Médoc wine of a distinctive character. Now the position is entirely changed. Since the devastation of the French vineyards by phylloxera the natural red wines from southern Europe generally found their way into our market. These at first were disguised as Bordeaux wines, but now we have them under their more correct designations. And thus the public taste in Great Britain has generally become more liberal, and French and German light wines are no longer almost alone in our market. It seems but a short time ago that it took Herculean efforts to create a demand and obtain a trade for the wines of other countries.

The testimony of a legion of M.D.'s was required to produce only a comparatively limited business in Hungarian, Greek, and Australian wines. Now the recommendations of these M.D.'s have ceased to be a necessity, and wines from the Cape, from Spain, Algeria, and, indeed, all southern European countries, are being imported, and find a regular market in London. These, in consequence of the admirable facilities for blending them, and before the duty is paid, are now blended together by the large wholesale merchants and made into "claret," much to the profit and satisfaction of the importing merchants and public generally. This work was formerly done in Bordeaux, but is now accomplished in all the principal centers of trade in the United Kingdom, and the British public have now the advantage of drinking a very fair wine. By the system of government analyzing we are kept pretty free from improper adulterations, and the result to the public is that they obtain a good, pure, and cheap wine. In addition to this there is a gradually increasing trade for Californian wines under their proper names, and there is hardly a town in England where such wines are not offered by enterprising merchants to consumers, who buy them out of curiosity and interest in all things American.

I think you will agree with me, therefore, that the present time is a favorable one for the introduction of Californian wines into the London market. I am enabled to say this with more confidence, as I know from my own experience that a large quantity of Californian wine is at this time being largely used by firms with whom I am in close business relations.

It is well, however, that certain facts must always be remembered. The English wine merchant is a man educated to his business, and knows wine almost as a science. He would require thoroughly sound wine, vinous in character, and without any unpleasant peculiarity, especially that raspberry flavor of which I have so often complained.

The long voyage would be an advantage for a properly fermented and sound wine, which would have the effect of aging it considerably.

The advertisement given by the recent importations of Californian fruit into England would greatly assist in helping the experiment of consigning wines to that market. It would be necessary that such consignments should be sent in sufficient quantities to command attention, and that the various interests should be united under one consignee. By this means much loss and disappointment would be avoided. Unless a proper system of realization were adopted, in which the various interests would be prevented from conflicting, the experiment would be attended with considerable risk. Assuming, then, that all the various interests in California were united under one agency in England, it would be greatly advantageous to establish uniformity in other matters, to wit:

It would be useless to send sweet wines, or any so-called "Ports" or "Sherry." Hamburg is quite able to manufacture any quantity of such wines out of pure Elbe water, which would compete with Californian wine.

Each estate should have its distinctive trademark, without attempting in any way to imitate French names. The various grades should be indicated, and each class should assume its relative position under such distinctive trademarks. Thus, each separate brand would have its proper value, and would not in any way interfere with other brands, in

the same manner that corresponding French products do not interfere with each other in realization.

Unsound wines, or wines below a certain standard of quality, should not be shipped to London, as any inferiority or faultiness in quality would at once be detected, and reflect upon the value of the wines of the State. Thus, by this combination, the prestige of Californian wines will be maintained, and the interests of the viticulturists would be protected, and a general standard of value in their wines would be arrived at.

The union of interests would thus establish the Californian wine trade upon its proper basis. Unless this is done there is great danger that the promiscuous importation of wines of low value to a market where their reputation has yet to be made, would lead to an unnecessarily low value being placed upon them. It should be remembered that the average quality of good Californian wine is quite equal to the ordinary growths of France and Germany; therefore there is abundant encouragement to establish such a system as I have recommended for the judicious management and control of exportations to this market. If your Board will take the matter in hand at your end, I shall be glad to give the matter my best attention in London. I am quite ready to devote myself to establishing the reputation and business of Californian wines, provided I am given the necessary support. Provided the business could be established upon this basis, I think there would be no difficulty whatever in eventually obtaining the aid of sufficient capital to organize a trust to place the matter beyond the region of a possibility. I have hitherto been slow to advise the exportation to Europe of Californian wines, but for the reasons I have given you, I am now satisfied that they may be made to take their proper place in the wine markets of the world.

I shall be glad to hear from you, and have much pleasure in placing my services at your disposal.

Faithfully yours,

EDWARD J. HOWELL,

European Correspondent of the State Viticultural Society, etc.

EXPERIMENTAL STATIONS.

In the former reports of this Commission a great amount of space has been devoted to the phylloxera, its method of propagation, its effects on the roots of vines, etc., and also to the resistant properties of the different American vines, and there is no further need of general information on these subjects. What is needed now by the vine growers is accurate information regarding the resistant properties of the different varieties of American vines in the different counties of the State. In certain soils one variety will resist better than another, and to determine which is the best variety for any county experimental plots will be established by this Commission in all sections where the phylloxera now exists. In these experimental plots all of the different varieties of resistant vines will be planted and grafted, and yearly reports will be made showing the success or failure of all the varieties. The vineyardists will then have an opportunity to examine the vines, and so determine for themselves the best variety or varieties to plant in their county. Such experiments have been conducted in France for many years, and have proved of great advantage to the vine growers of that country. The latest report of Prof. A. Millardet on the resistant properties of the

different American vines is a very interesting one, and I have taken the liberty to translate it, and include it in my report. I am in hopes that after our experimental plots have been in existence for several years, this Commission will be able to make a report to the vine growers of this State of as great importance to them as this one of Professor Millardet's has been to the vine growers of France.

These experimental plots will be located in Napa, Sonoma, San Joaquin, and Santa Clara Counties. The location of the same will be decided upon during the coming winter, and they will be planted next spring.

This move on the part of the Commission will be appreciated by the vine growers, for no work of this kind has as yet been attempted in the State, and the information they have received concerning the resistant vines and the proper ones to plant, has been very meager.

At a meeting of the Executive Committee of this Commission, held September 12, 1892, I presented the following plan for establishing these experimental plots, and it was unanimously adopted:

SAN FRANCISCO, September 12, 1892.

To the Executive Committee of the State Viticultural Commission:

GENTLEMEN: At the last meeting of your committee you requested me to draw up a plan for carrying out your idea of establishing experimental plots in different sections of the State, for the purpose of testing the resistant properties of the different American varieties, and also for determining the best varieties of European vines to graft upon them.

It is a well-known fact that a certain American variety will resist completely the attacks of the phylloxera in one place, while planted in another locality, where the climate and soil are different, it will be only partially resistant. In order, therefore, that the vine growers of the State may be able to determine which is the best variety of the resistant vines to plant in his locality, I would advise the adoption of the following plan for establishing experimental plots in those counties where the phylloxera is known to exist:

First—That there should be a plot established in the following counties: Napa, Sonoma, Santa Clara, and San Joaquin.

Second—That each plot should contain two acres.

Third—That in each plot there should be planted all the principal varieties of resistant vines.

Fourth—That each plot should be located in a vineyard where phylloxera is known to exist.

Fifth—That the selection of the plots shall be left to the Commissioners who represent the districts in which they are situated.

Sixth—That the cost of planting and taking care of the plots shall be borne by the Commission.

Seventh—That these plots shall be under the supervision of the Chief Executive Officer, who shall have power to purchase the necessary vines, and give instructions how they shall be planted and taken care of. He shall receive his instructions from time to time from the Executive Committee, and he shall be required to make a report to them, for publication, at least twice a year. This report should show the number of varieties planted, and the relative condition of each variety in each plot. The Chief Executive Officer should be required to visit each plot at least once a month, from April to September, and as often as necessary during the remaining months.

Eighth—That these plots shall be open to the inspection of all persons at all times.

Yours respectfully,

CLARENCE J. WETMORE,
Chief Executive Officer.

As I have said before, these experiments are being extensively carried on in France, and up to the present time we have been compelled to look to the reports from that country for any advice we may have needed in the selection of resistant vines. In the future this Commission hopes to furnish all the information that is needed on this subject.

The following report of Professor Millardet will prove of interest at the present time, and will show how the experiments are carried on in France:

NEW RESEARCHES UPON THE RESISTANCE OF, AND EXEMPTION FROM, PHYLLOXERA.

By A. MILLARDET, Professor of the Faculty of Science of Bordeaux.

SCALE OF RESISTANCE.

Viticulturists often find it necessary to compare and to estimate the resistance to phylloxera of the different American varieties used either as grafting stocks or as direct producers. To do this they are in the habit of reporting that a variety resists in such and such soils for a greater or less length of time, or that it commences to deteriorate after so many years of culture, or that it grows more or less vigorously than some other variety. The condition of the roots is scarcely ever questioned, and yet there is to be found the principal proof of resistance. The vigor of the vine can be sustained by the nature and fertility of the soil, by the climate, etc., and can disappear at any moment, even after many years of duration, under the action of the phylloxera.

A considerable time ago, in 1877, after having considered the phenomena of resistance a little more closely than had been done up to that time, and even more so than is usually done at the present time, I recognized two very distinct kinds of causes of resistance: First, those inherent in the plant, which were designated under the name of intrinsic causes; second, those independent of the plant, or, in other words, exterior to it, which were called extrinsic causes of resistance.

The intrinsic causes are allied to the very nature of the plant, which is the cause of its being more or less attacked by the phylloxera; of the punctures of that insect, producing swellings, nodosities, and tuberosities, more or less numerous, upon roots of different degrees of strength; the cause also of these swellings rotting more or less easily, more or less deeply, and by that rot determining more or less rapidly the enfeeblement of the roots upon which they are situated, and consequently at last the death of the vine.

The extrinsic causes are all those which, increasing or diminishing the vigor of the plant, favor or retard the reparation of the organs attacked by the insect. Two new extrinsic causes of resistance have been revealed to us since my article in "La Question," published in 1877: (1) In grafting, by Dr. Davin; (2) In certain methods of pruning, the result of which is seen upon the development of the roots of the plant, by M. Dezeimens.

I ought to add that, according to another theory, the soil and the climate can act upon the resistance in favoring or hindering the approach, the dissemination, and the activity of the phylloxera. Sand of a certain fineness is an obstacle to the spread of the phylloxera from the surface to the roots, and from one vine to another. The same varieties of vines, in soils as similar as possible, resist for a much longer time in the west and central portions of France than they do in the south, because in warmer climates the phylloxera lives dormant a much less time, and

because its multiplication, as well as the rotting of the roots, are there favored by a higher temperature. As the effective resistance of any variety whatever depends upon the concurrence of all these causes, intrinsic as well as extrinsic, one comprehends, *a priori*, how variable it must be, and experience demonstrates the same fact. For instance, a certain variety of vine which apparently ought to possess, upon a given point, an almost unlimited resistance, one finds perishing in a few years, under the same climate in a different soil, or under another climate in a soil as similar as possible. Since the publication of my article in "La Question," most of the extrinsic causes of resistance have been reunited under the name of adaptation to the soil and to the climate. The promoters of adaptation have gone so far as to say that, provided that an American vine be well adapted to its condition of existence, its effective resistance ought to be sufficient, whatever may be its intrinsic resistance. It is not necessary to say that this opinion rests upon a complete confusion of all the phenomena, and that it finds itself contradicted by a multitude of facts.

The reader sees clearly how numerous and various are the extrinsic causes of resistance, and how difficult in consequence it must be to appreciate with some exactitude their action upon the plant and the reaction of the latter. It is not the same with the intrinsic causes, as we shall see.

From the beginning of my studies upon these phenomena, I have remarked that the resistance to the phylloxera is an hereditary property. It belongs to some species of wild vines of America and not to others; also, that the varieties cultivated by the Americans are resistant or not, according as they descend directly from resistant or non-resistant species. Furthermore, as these cultivated varieties are most often the result of crossings between resistant and non-resistant species, their resistance is generally intermediate between those of the species which compose them. Thus, the *Clinton* is less resistant than the *V. Riparia*, because it is the product of the cross of that resistant vine with the *V. Labrusca*, non-resistant. I refer for all facts of this kind to my "Historie des Vignes Americaines."

Accordingly a person could determine the resistance of a hybrid vine, if it were possible to recognize its parents and in what proportion they are mingled in it. In fact, the problem can be solved by that method in some very simple cases, but the complexity of the laws of hybridization is such that generally it is insoluble.

Since that method, which one would call *phylogénétique*, from a term borrowed from natural history, only furnishes us, the greater part of the time, with uncertain results, it remains for us, in order to appreciate the intrinsic resistance of a given vine, to study and compare the number and gravity of the injuries that the phylloxera does to its roots. The following will show in what conditions it is important to place ourselves for this study, so as to be as certain as possible that the number and gravity of the injuries observed attain in a given case the maximum which they can attain in general. I have shown, some time ago, what these injuries are in "Rot and Phylloxera" (1882), "History of American Vines," introduction of the "Journal of Practical Agriculture" (June 24, 1880).

In some very rare cases, where the phylloxera does not even remain upon the roots and produces no injuries at all, the plant is said to be indem-

nified. With the greater portion of plants it stops at the end of the youngest roots, and punctures them at about .039 of an inch from the extremity, and fixes itself at that point. In less than eight days a nodosity, having generally the form of a bird's head, is found at the point of the puncture. These nodosities rot more or less rapidly; generally in the European vines, by the last of August they have almost all succumbed to the rot. In American vines it is about the same thing, with the exception that the nodosities remain healthy for a long time.

The nodosities, in rotting, cause the loss of the rootlets at the extremities of which they are located. Sometimes the rootlets grow in length after the nodosities have been formed on them, but the rot of the nodosities comes sooner or later, and renders useless this new growth. In such cases the rootlets, instead of perishing at their extremities, as in the first case, perish at a point higher up, or where the nodosity was first formed. The result is, however, the same.

The size of the nodosities vary very much. With the European vine they attain from .118 to .157 of an inch in thickness and .589 of an inch in length, while with the American vines of high resistance they rarely go beyond .039 of an inch in thickness and .157 to .196 of an inch in length. Between these extreme dimensions may be found all the possible intermediate ones. Their number varies very much; according to the varieties it is possible to find them on all, or nearly all, the rootlets (European vines); on others 60 per cent of the rootlets will have them, and from that down to 1 per cent. A great many American vines are not injured in any other way by the phylloxera, except the forming of a few nodosities, no matter what the age of the vines are or in what climate they are grown. Such vines have a very high resistance.

With the European vines, as well as with many American vines, a short time after the formation of a considerable number of nodosities upon the rootlets, the insects, having multiplied, return to the main roots, at first upon the smallest ones, then gradually upon those of a greater and greater size. In the European vine, a short time after the invasion, the insect is found upon roots of all sizes and of every age, and even upon the stock. Upon the new roots the insects are generally isolated, and they form at the place where each one of them is fixed a protuberance almost hemispherical, with a slight depression in the center, where the insect holds itself. That is what I call *tuberosity*.

Upon roots of several years' growth and upon the stock, the phylloxera are disposed in numerous families at the base of the lengthwise cracks of the bark, and the tuberosities become confluent, longitudinal bands of swellings, sometimes several centimetres in length. Tuberosities are never found upon the roots of vines that are free from nodosities. Usually the tuberosities are found on vines that have from 40 to 50 per cent of their rootlets occupied by nodosities.

Tuberosities are not found upon the large roots when the rootlets do not contain any. Therefore, it is useless to look for tuberosities upon vines which lack nodosities, and also upon vines whose roots of .058 to .118 of an inch in diameter are found to be free from them.

The size of the larger tuberosities vary. In their minimum of development with certain American vines they run from .039 to .058 of an inch in diameter by .019 of an inch in thickness. On the European vines the isolated tuberosities reach .157 of an inch in diameter and as high

as .157 of an inch in thickness (*Folle Blanche*). In general, plants that have little nodosities have little tuberosities, and vice versa.

The fate of the tuberosities is the same as that of the nodosities, viz.: the rot; but generally they succumb to it after the first year of their formation. The rot of the tuberosities proceeds from the surface, and extends progressively in depth. Little by little it passes beyond the bark of the root and arrives as far as the wood. The wood then turns black and is destroyed, and all that part of the root beyond the place where the rot started is lost to the vine. It is for this reason that the tuberosities are infinitely more dangerous than the nodosities. The rot of a nodosity, and accordingly the loss of a rootlet, is an affair of several days or several weeks only; months, and sometimes years, are necessary for the propagation of the rot of a tuberosity through all of the root, the length of time depending on the size of the root.

It happens frequently, especially so with the *Estivalis*, that the rot, which has its point of departure in the tuberosities, is arrested in its progress in depth by layers of cork, which protect the underlying tissues from its actions. But when the tuberosities are large and numerous the rot always finds some means to turn from these natural barriers at several places (*Jacquez*, *Blue Favorite*).

As a general rule the larger the tuberosities the more easily they rot, and the more dangerous they are to the root upon which they are situated, and threaten the complete loss of the root in the near future.*

The regular succession of the phenomena which I have just explained, the production of the nodosities and the tuberosities, their size and number, furnishes the means of estimating in an exact-enough manner the intrinsic resistance of a variety. This fact is the most important one to know positively, because the vigor of a plant of high intrinsic resistance can never be put in peril by the phylloxera, no matter what the surroundings may be.

From 1885 to 1887 I had established upon these facts a classification of American vines with a view to their intrinsic resistance. Since that time the classification has been perfected by degrees, and changed to a sort of scale of resistance. We (M. de Grasset and myself) used it at first to determine the resistance of our hybrids. Some persons have had knowledge of it and have published it in a manner more or less complete; others have imitated it. Some day I may be able to continue my work upon this scale of resistance and give more details. At the present time I will limit myself to only a perception of it.

In the table which follows, the numbers are the coefficients of resistance. The explanation which follows them indicates the number and the gravity of the injuries which correspond to these coefficients. Afterwards come some examples taken from the best known varieties. The scale is divided into several sections, which correspond to the letters *a*, *b*, *c*, *d*, and each section is characterized by some new injuries of the phylloxera, or only by an increasing gravity, which is superincumbent on those of the preceding sections, so that the resistance decreases regularly from the top of the scale to its base, that is to say, from 10 to 0.

I have only sought to characterize freely the highest degrees of the

*Perhaps some one will say that in this theory of resistance I have made no allusion to that which has been proposed by M. Foex. I have not done so, for I believe that I refuted his theory some time ago in my "History of American Vines."

scale, the most important to the end in view, limiting myself to simple examples for the lower degrees.

- a.—No injury.
10. Complete exemption. Example: *Scuppernon*, *Aramon*, *Rupestris* *Ganzin* (according to M. Ganzin) *Rupestris*, *Estivalis* *de Lezigan*, some rare *Riparias*, *Rupestris*, *Cinereas*, etc.
- b.—Only nodosities, usually very small. No tuberosities.
- 9.5. From 1 to 10 nodosities for every 1,000 rootlets. Example: *Cordifolia-Rupestris-de-Grasset*, some *Riparias*, *Rupestris*, *Cordifolias*, *Cinereas*, etc.
9. As many as 5 nodosities to every 100 rootlets. Example: *Rupestris-Cinerea-de-Grasset*, a considerable number of *Riparias*, *Rupestris*, *Cordifolias*, *Cinereas*, etc.
- 8.5. As many as 10 nodosities to every 100 rootlets. Example: *Azémar*, the majority, perhaps, of the *Riparias*, *Rupestris*, etc.
8. As many as 20 nodosities to 100 rootlets. Example: *Gigantesque* (?), many *Riparias*, *Rupestris*, etc.
- 7.5. As many as 40 nodosities to every 100 rootlets. Example: *Rupestris*, *Taylor*, *Black Pearl*.
- c.—Nodosities becoming insensibly larger and usually more numerous than those of *a* and *b* in proportion as one descends the scale; tuberosities rare and small (.058 in. in thickness at the most).
7. Nodosities equally or more numerous than the preceding ones. Tuberosities very rare and small (.058 in. in breadth by .019 in thickness), and only upon the roots of .078 in. and less in thickness. Example: *Berlandieri* (of Docteur Davin), a considerable number of *Riparias* and ordinary *Rupestris*, some *Champins*, and some *Riparia Candicans*.
- 6.5. Ditto for the nodosities, the latter being larger. Tuberosities rather frequent upon the little roots; rare upon those from .078 in. to .118 in. in diameter, attaining .039 in. in height. Example: *Solonis* and a few of its seedlings, many *Champins* and *Riparia Candicans*; some *Riparias*, *Rupestris*, etc.
6. Ditto for the nodosities. Tuberosities a little larger and more numerous, and upon stronger roots. Example: *York Madeira*, most of the *Champins*, and some seedlings of the *Solonis*.
- 5.5. Nodosities and tuberosities still larger and more frequent. Example: *Huntingdon*, *Noah* (?).
- d.—Nodosities and tuberosities more and more numerous and larger; the tuberosities increasing insensibly according as one descends the scale, .118 in. in height (in the European vine), and occupying larger roots (the roots of every age, and even the stock in the European vine). Roots from .039 in. to .078 in. in diameter nearly all rot in September, in the South; larger roots, more and more contaminated, and rotted in the interior, according as one descends the scale.
5. Example: *Herbemont*, *Jacquez* (?), *Noah*.
- 4.5. Example: *Jacquez*, *Cunningham* (?).
4. Example: *Blue Favorite*, *Cunningham*, *Violla* (?).
- 3.5. Example: *Taylor*, *Clinton*, *Violla*.
3. Example: *Elvira*.
- 2.5. Example: *Othello*, *Rulander*, *Delaware*, *Waverley* (?).
- 1.5. Example: *Senasqua*.
1. Example: *Isabella*, *Triumph*.
0. Example: *European Varieties*.

One will notice that the name of several varieties is followed by an interrogation point. It is when my experience has seemed insufficient to fix in a more certain manner the place of these varieties in the classification.

In spite of its imperfections, I hope that this scale of resistance will render some service, and it is especially this that I desire. One may easily criticise it, but may those who feel disposed to do so reflect first how delicate this subject is, and how it necessitates observations. It has cost me thousands of observations with the naked eye upon the fresh subjects in the vineyard, with the microscope upon specimens preserved in alcohol and in the cabinet.

It will be necessary still to indicate the precautions with which it is indispensable to be surrounded, when one wishes to judge with some exactitude of the degree of intrinsic resistance of a given plant. An example will be better than all the reasonings to enable one to judge of the difficulty of this class of observations. In the month of March, 1884, I sent to M. de Grasset, at Laval, near Pézenas, thirteen hundred young hybrids, Franco-American, springing from a seedling of the preceding

year at Bordeaux. He had just dug up in deep, gravelly clay a vineyard dead from phylloxera. The hybrids were planted at the rate of two thousand to 2.47 acres. Two years after the plantation seemed completely invaded by the insect. At the third and fourth years several hundred plants had already succumbed, while nearly double that amount showed more or less enfeeblement; about two hundred stocks presented an unusual vigor. Attentive diggings were made, and coefficients of resistance given, according to the state of their roots. The coefficients of these stocks varied somewhere from 5 to 10.

The following year ten cuttings of each of the stocks which had a coefficient higher than 7 were set out 328 feet from there, in a vineyard newly dug up that the phylloxera had destroyed. These cuttings were planted four thousand to the acre, and in the month of June, 1889, some handfuls of phylloxerated roots were laid upon their young roots. In 1890, two vines of that year's growth, from these same plants, were sent to me, which were planted in my experimental vineyard at Talence, near Bordeaux, in gravelly-clay soil, from 7.80 ins. to 11.70 ins. in depth, overlying a white marly limestone, in holes from which I had just had dug up as many phylloxerated stocks. In 1891, an inspection of the roots of these plants was made, in the two plantations of Laval, the first time in June and the second time the first of October, and at Talence towards the middle of the same months; new coefficients were given at each inspection.

The reader may believe that at the present time the hybrids which are indemnified at Laval in the first plantation made in 1884, and where 97 to 98 per cent of the plants which surround them are dead, or at least attacked by the phylloxera, are equally indemnified in the plantation of ten stocks made about four years after, and in that of Talence made in 1890. It is nothing of the kind. Several mother stocks are at the present time absolutely indemnified (that is to say, merit the coefficient 10) in the plantation of 1884, which have only the coefficients 7, 6, and even 5, in the neighboring plantation of ten stocks, and at Talence. Several plants have 10 in the two plantations at Laval, which have only 7 to 5 in that at Talence.

To what are these considerable errors due, and what is it necessary to do to rectify, or rather to prevent them?

The first explanation which presents itself to the mind, is that there may be in different parts of the field, at the foot of certain stocks, several colonies of those numerous species of insect enemies of the phylloxera, which are opposed to its multiplication. The only means of preventing one's self from falling into such an error, will be to test, as we have done, the resistance of the plants; not of one vine, but of several; not at one point only, but at several different points.

Another explanation is furnished me by the following observation, which enlightens us, at the same time, upon the first cause of resistance; that is to say, upon the reason why certain vines are never attacked by the phylloxera, whilst others are a little, and others much. Many years ago I had the idea of subjecting, simultaneously, several vines of diverse nature to the action of the phylloxera. That was in summer. I took out of the pots with care several seedlings of the *Riparia*, *Cordifolia*, *Clinton*, *Jacquez*, *Solonis*, and *Chasselas*;^{*} then I put their roots in a

^{*}I cite from memory; there may be some nominal errors of variety, but the spirit is there, if not the letter, of the composition of the lot of plants experimented upon.

large jar, containing a little water, into which some of them plunged their extremities, while the stems were inserted in the cork, which was cut in half and pierced with holes. To restrain the exhalation, two or three leaves only were left on each plant.

Several days after, a great number of new rootlets being developed, either in the water or out of the water, in the upper part of the jar, I introduced below the cork two or three leaves of the *Clinton*, covered with phylloxerated galls. They were suspended by a thread, in contact with the roots, after which the cork was replaced, and all the holes carefully stopped up with wadding.

Twenty-four hours after I could see circulating, either upon the sides of the jar or upon the roots, hundreds of phylloxera newly hatched and coming out of the galls. I had then the opportunity of establishing the following fact: Upon the rootlets of the *Cordifolia* and of the *Riparia* these insects moved rapidly, rising and descending without stopping; or, if they stopped, it was only for a moment. On the contrary, upon the rootlets of other plants, after having wandered for some time, they fixed themselves at the extremity, and moved no more. Two or three days after the greater part of the insects were fixed, and I could distinguish numerous nodosities forming upon the *Chasselas*, a less quantity upon the *Clinton*, *Jacquez*, and *Solonis*, and none upon the *Riparia* and *Cordifolia*.

I concluded that during the first hours the movements of the young phylloxera were so rapid and animated, because they were in search of nourishment. They only passed up and down the roots of the *Cordifolia* and the *Riparia*, but did not stop, because the latter did not suit them, for some reason or other. They stopped and fixed themselves upon the others, because they pleased them more. Those of the *Chasselas* were the ones that pleased them most of all.

My first thought was that if they did not fix themselves upon the *Cordifolia* and the *Riparia*, it was because the epidermis of these rootlets being stronger and thicker, offered to their suckers, yet very feeble, a resistance which repulsed them and decided them to go elsewhere. But an attentive examination of these rootlets with the microscope, and of those of the *Chasselas*, revealing to me no appreciable difference in the thickness of the exterior epidermic membrane, I was obliged to look for another explanation.

I was satisfied with the following, which I believed to be the right one: The insect, in passing up and down upon the surface of the roots, stopped from time to time to eat. If the flavor of the root suited him, he fixed himself; if otherwise, he sought for food elsewhere. The flavor of the *Cordifolia* and of the *Riparia* being to him very disagreeable, he went on farther. As that of the *Clinton*, *Jacquez*, etc., suited him better, he willingly stopped upon these varieties; but all the insects of a more refined taste, or less hurried by want of food, which had refused the preceding roots and stopped upon those of the *Chasselas*, left them no more.

This conclusion is in harmony with the recent researches of M. Büsgen upon the biology of the insects.

So then, as I believe I have announced somewhere, the plants indemnified are so because the phylloxera cannot accommodate itself to the flavor of their roots; those which are simply resistant, are so because the insect is only nourished by them with a certain repugnance; those which are

not so, and where the insect multiplies, is because the juice that it draws from the plant pleases it, and because an agreeable nourishment favors its multiplication.

It seems probable to me that in the experimental fields, as those of M. Grasset, the oldest, especially (of 1884) where the most varied hybrids were found, the phylloxera comports itself in a like manner as in the jar, which has been spoken of above. The roots of all the plants finding themselves mingled together, the insect which moves on their surface makes a choice of those which suit its taste, and refuses the others. In a nursery of this kind the plants indemnified are only so by comparison, if I may express myself so, that is to say, in consequence of their neighborhood to plants of which the roots have a less disagreeable flavor.

It follows, therefore, that plants indemnified in a plantation of this kind will no longer be so if one puts them all together, or if they are only surrounded by varieties of a very high resistance, of which the flavor is still more disagreeable to the insect than to theirs. The latter, rather than be left to perish from hunger, will attack their roots in spite of the repugnance to their taste. But that disagreeable nourishment, taken against their will and in a small quantity, will never favor much its multiplication, and that will be a condition of resistance for those plants. Experience has taught me, in fact, that in those conditions the plants seeming indemnified until then, may be seriously enough attacked by the insect. One sees, then, in two or three years at the most, often from the first, the coefficient 10 is replaced by others of a less degree. I have never seen it fall below from 5.5 to 5, that which is still a fine enough and sufficient resistance in some cases.

I cite some examples in support of these conclusions:

About eight years ago M. Ganzin showed me, at his place at Pradet (Var), some vines of the *Rupestris* which bear his name, which have been grafted deeply upon vigorous stocks of the *Clinton*. The roots of the *Clinton* were covered by hundreds of nodosities; there was not one of them upon those of the *Rupestris* which were intermingled with those of the *Clinton* spoken of above. We thought, M. Ganzin and I, that that *Rupestris* was indemnified.

I was living under that impression, when four or five years later, after having shown to a visitor in my vineyard, at Talence, many phylloxerated roots, and wishing to show him some indemnified ones, I called his attention to that same *Rupestris* Ganzin. At the first cut of the spade, and to my great confusion, some nodosities appeared. It is true that the plant of which I had dug the roots was surrounded by about fifty vines of the same variety. Some of these vines, visited in their turn, also showed some nodosities, others presented none.

In 1887 M. Couderc showed me the roots of the stocks of the *Gamay Couderc* in the middle of his field of seedlings. I still see the superb beard of the root, composed of several hundred fresh rootlets, absolutely healthy and without the least injury from the phylloxera, intermingled with some roots coming from neighboring hybrids, which were found covered with nodosities. I was enthusiastic, and several weeks after I proclaimed loudly the immunity of the *Gamay Couderc*. I ignore what is the coefficient which this plant really merits, but what I do know is that he who raised it himself has no longer faith in its immunity.

All this shows what is necessary to do to judge of the immunity of a

plant from phylloxera. It is indispensable to make observation, not upon a single plant, but upon several, situated in two or three different localities, in soils favorable to the phylloxera, and even superficial, if possible. It will not be necessary to have in the neighborhood of the plants under observation a vineyard, or any variety of the highest resistance (*Riparia* and *Rupestris*, for example). To avoid a delay in the natural infection, it is produced artificially in the course of the summer; once at first, afterwards as many as three times successively, if the preceding experiments have not been successful. One sees that the immunity is of an extremely delicate authentication, and is it the same with the fixation of other coefficients? No, happily not. If we suppose a vineyard to be only surrounded by varieties of a very high resistance, and that the phylloxera took the first time on the roots, one could feel certain, I believe, that two or three years at the most, after the infection, the state of the roots will be such that it will change no more, and that the coefficient given will be definite. But here still it will be necessary to make experiments upon two or three different points in superficial soil, in a manner to put it in condition favorable to the insect, and to prevent errors which might come from the presence of the enemies of the phylloxera, or even from other unfortunate circumstances which it is impossible to foresee.

One has seen that several degrees of the scale are characterized by a certain proportion of nodosities to every thousand or every hundred rootlets. In those cases, the coefficient will have as much more certainty as the number of examined rootlets will be greater in number.

These observations ought to be made in September. At that season, with the American vines, a great number of nodosities are still fresh, and those which have already rotted do not remain so easily in the soil when the roots are dug up later. Moreover, at that season, the phylloxera has already performed all its work—that which has not been done earlier in the year. The examination of the tuberosities can be made any time of the year.

There is in the scale of resistance a point perfectly fixed, easy to determine, and of capital importance, when the studied vines are destined to serve as grafting stocks: it is the appearance of the tuberosities (coefficient 7).

In fact, in 1888 I established by some examples (and I do not believe that there exists at the present time a serious observer who contests it) that in the olive region, all the varieties which have tuberosities, if they are ever so small (*Solonis*, *York*, *Huntingdon*, *Noah*, *Herbmont*, *Jacquez*, *Cunningham*, *Taylor*, *Clinton*, *Violla*), are grafting stocks insufficient in resistance, even in good soils, and by greater reason in the poor soils. From that the precept is to use as grafting stocks in those countries only vines exempt from tuberosities, that is to say, having a coefficient higher than 7. In the regions farther north, especially since I have seen in the west and the southwest, in deep soils, grafts of ten, twelve, and fifteen years upon *Solonis*, *Clinton*, *Taylor*, *Violla*, *Jacquez*, perfectly vigorous and fruitful, with the roots in a good state, I think that one can utilize as grafting stock, at least in deep soils, varieties situated lower in the scale than those which are necessary in the south. Nevertheless, prudence commands one to pay attention, when one can do it, to the plants of a resistance as high as possible. The havoc made upon the roots by the phylloxera (the tuberosities especially) are always a

cause of enfeeblement to the plant, and must be paid for, sooner or later, by a diminution in vigor and production, or by expensive fertilizing.

As for direct producers, it seems from general experience that one can in the south, in good soil, take those having coefficients as low as 5, and even 4.5, and in regions more northerly, as low as 3, or even 2.5, according to circumstances.

NOTES UPON SEVERAL GRAFTING STOCKS RESISTANT TO CHLOROSIS AND PHYLLOXERA.*

The hybrids between American species of vines have been a precious conquest to viticulture. They constitute, in fact, new grafting stocks, more or less intermediate between the component species, and reuniting in consequence, up to a certain point, the particular properties of those species—vigor, resistance to phylloxera, growing by cuttings, aptitude to live in certain soils, to receive the graft, etc. In several cases even an unexpected result is produced, as has been remarked by M. Ravey, by the apparition with these hybrids of properties which were lacking in their parents. It is thus that the hybrids between *Riparia* and *Rupestris* have a high resistance to the calcareous chlorosis, although each one of these two species, taken separately, is very sensitive to that affection. The hybrids between *Rupestris* and *Arizonica* seem to be in the same case.

Results none the less important may be expected from crossing our European varieties with the American species, the latter giving to the hybrid resistance to the phylloxera and to mildew, and the European vine transmitting to it its adaptation to calcareous soils and to the different climates of our country, and giving to it, besides, an affinity for the European graft, which cannot exist to the same degree with the purely American grafting stocks. Not only has experience realized these theoretical promises, but besides it has produced in these hybridations, as in those which have just been spoken of, a happy fact that was difficult to foresee. In some cases, in fact, the resistance of the American vine passes wholly in the hybrid, without being enfeebled by the non-resistance of the European parent.† The first examples of that phenomena are due to MM. Ganzin and Couderc; we have had the occasion of establishing a large enough number of others, M. de Grasset and I, during the course of these latter years.

Thus it is not astonishing that certain of these hybrids are presented here as being as resistant as the best *Riparias* and *Rupestris*, or even as being completely indemnified from phylloxera; because not only these facts are affirmed by the most worthy observers, but they may be established anew each day, by persons who would wish to examine them, in the plantation of M. de Grasset.

It will be well, without doubt, to tell by what experiments we have been able to assure ourselves, my co-worker and I, that the hybrids in question in these notes are either completely resistant to the phylloxera, or even absolutely indemnified from that insect.

*These grafting stocks are offered for sale by M. Ferdinand Couisset, proprietor at Montagnac (Hérault), member of the Society of the Agriculturists of France.

†It may be seen in my essay on the hybridation of the vine (1891. Bordeaux, Féret; Paris, Masson) in what conditions these curious phenomena are produced.

Plants, in 1884, one year old, in soil a pebbly-clay, up to that time occupied by an old vineyard which had just died from phylloxera, were found completely invaded by the insect from the second to the third year. During the fourth year some attentive diggings were made at the roots of the finest stocks, and a first coefficient of resistance was given. At the same time some cuttings of these same plants were placed in another vineyard, also dead from phylloxera, and from the month of June of the following year some handfuls of phylloxerated roots were placed upon their roots. In the month of June of that year (1891) diggings were made by M. de Grasset and I, and the roots observed with the greatest care, both upon the mother plants and upon those infected and coming from cuttings, and new coefficients of resistance were given. Finally, the last of September a new and more minute examination was made, both in these same two plantations of Laval and in my phylloxerated vineyard at Talence, near Bordeaux, where, besides these hybrids, were found only plants of the highest resistance. The definite coefficients of resistance attributed to each of the plants in question were results from taking these observations as a whole. As a passing remark, none of these coefficients are inferior to 7.5.

It will be good to recall, in order to realize the importance of this minimum coefficient of 7.5, that in 1888 I proved by some examples (and these last years have given me a right to think) that in the olive region the *Solonis*, *York Madeira*, *Jacquez*, *Vialla*, etc., which, ungrafted, resist the phylloxera, succumb to its punctures if they are grafted, even in soils of good quality. This result is prompter still in poorer soils. Judging from that, I advise the planting in that region of grafting stocks of a higher resistance. Now, as all varieties which have been questioned have this in common, that they bear tuberosities more or less numerous and developed upon their roots, I concluded that it was absolutely necessary to employ in the Mediterranean region only grafting stocks exempt from tuberosities, however small they may be. In climates more temperate a resistance as high, if it is still desirable, does not appear to be as indispensable. It is in order to carry out this principle that we have followed with so much care, M. de Grasset and I, the development of our hybrids for nearly eight years, putting aside without mercy plants, even the most vigorous, as soon as the smallest tuberosity had been once established upon their roots. Thus, then, I repeat, not one of my twenty plants has a coefficient of resistance inferior to 7.5; some have 10; the greater part have some intermediate coefficients between these two extremes. Will they, with this high resistance, and even this immunity, hold in all soils where they may be placed? The varied tests to which we have subjected them during these last eight years seem to promise it, and we dare to hope it. To affirm it would be, one comprehends, to go beyond the limits of scientific induction.

The degree of resistance to the phylloxera of these hybrids being thus clearly characterized, let us see what is their resistance to calcareous chlorosis.

Although this last affection proceeds essentially from the presence of certain quantities of carbonate of lime in the soil and in the subsoil, it is impossible at the present time to say what number of grains of limestone must be contained in 100 grains of a certain soil for the commencement of the chlorosis for a given grafting stock. It happens, for example, that a variety is affected by chlorosis in a soil containing

only 15 per cent of limestone, while it remains green in a soil which contains double that amount. It is that the ill-omened action of the carbonate of lime is augmented or diminished in a most irregular manner by a crowd of circumstances generally difficult of estimation, such as the depth of the soil, the nature of the subsoil, the humidity, the state of culture, perhaps also the fertility, etc. To this difficulty is joined another; it is that a variety very often remains entirely green in a calcareous soil as long as it is not grafted upon, only to bear nothing but chlorotic grafts as soon as it is given a European head; and it is not even proved that in these cases the chlorosis does not depend sometimes upon the species of the graft.

It is impossible for us to establish a scale graduated centesimally for the resistance to chlorosis in limestone in a given soil; the better way, in order to appreciate that of the Franco-American hybrids, seems to be to compare them, in this light, to the grafting stocks best known up to the present time for that same property.

It is known that the most resistant to chlorosis, of the American grafting stocks, is the *Jacquez*. Now, all the Franco-American hybrids selected by M. de Grasset and I, do infinitely better than this variety in all the bad soils where they have been tried, grafted or not grafted upon. From the respective hold each of these hybrids has in the worst soils, their degree of individual resistance to chlorosis may be inferred. Thus, all have been planted within three years, and grafted upon within two years, in the pure, chalky soils of Charentes, a soil which one knows is the most refractory to the American vine, where the *Solomis* and the *Jacquez* themselves are subject to chlorosis, and are generally stunted when not grafted upon. Now, some of these hybrids bear at the present time grafts green, vigorous, and even fruitful in some chalky soils (not the worst, of course; for example, at M. Verneuil's vineyard at Cozes, and in one of the experimental fields of the Comté de Cognac), and this single fact, although this fine hold is not without exception, and it may not continue, shows how their resistance to chlorosis is superior to that of all the grafting stocks known up to this time.

I have still other reasons which allow me to recommend these hybrids for the restitution of vineyards in calcareous soils. Within four years they have been tried in the worst soils of the French vineyards, independently of the chalk, in lower Charente, at M. Bethmont's; at MM. Thibaut and Lacoste; at M. d'Hébray's, in le Tarn-et-Garonne; in the Lauraquais; at MM. de Malafosse and Calés; at Carcassonne, at M. Bary's; at Lezignan, at MM. Marron-Martin, Joulia, and Théron; in the Var, at MM. Davin, Ricavy, Barbier; in Saône-et-Loire, at MM. de Benoist and de Malartic; in l'Hérault, at MM. de Serres, Rey de Lacroix, de Grasset, Bouisset, etc., everywhere they have been placed in the worst soils that could be found, and cultivated without fertilizing. Many have succumbed to these rude tests, but a certain number, among which are those now placed at the disposal of the public by M. Bouisset, were found several weeks ago, and two years after grafting, to be perfectly green and vigorous, and even fruitful.

It is impossible for me to discuss in detail the nature of the soils where these hybrids have been experimented upon. It will be sufficient for me to indicate the hold they have in limestone of the worst soils among those where these plants have given satisfactory results.

At M. Bethmont's (La Grève, lower Charente), very bad soil, uncolored

to 5.85 ins. in depth at the very most; very stony, 20 per cent of limestone; subsoil consisting of a calcareous pavement impenetrable to the roots, 70 per cent limestone. Chalky land of M. Verneuil (Cozes, lower Charente), soil from 7.80 ins. to 11.70 ins. in depth, 45 per cent limestone; subsoil formed of chalky stones penetrable to the roots, 70 per cent limestone. M. de Grasset (Château Saint-Pierre, near Mont Blanc, Hérault), soil a marly, pebbly clay, uncolored, from 9.75 ins. to 11.70 ins. in depth, 40 per cent limestone; subsoil white marl, 66 per cent. M. Rey de Lacroix (Montagnac, Hérault), whitish calcareous soil, very stony, from 5.85 ins. to 13.85 ins. in depth, 63 per cent limestone; subsoil white limestone, friable, impenetrable to the roots, 81 per cent. M. de Serres (Montagnac), soil whitish pebbly limestone, from 5.85 ins. to 11.70 ins. in depth, 63 per cent limestone; subsoil white marl, 77 per cent.*

The following conclusion will be granted me without doubt. It is that the grafting stocks, which during three years without fertilizing have procured for their grafts, in the soils of this kind, a vegetation and a normal fructification, merit to be seriously considered. I fear it is true, in spite of some partial successes, that they may be insufficient for the chalk; but I am convinced that aside from the chalky formation they may be sufficient for the reconstruction of all the soils most subject to chlorosis, even the most feeble and superficial of Charentes.

May it be permitted me, still, to indicate the method to follow in the experiments of reconstruction.

Experience has taught me that the hybrids of which I speak have, individually, preference for certain soils. Let us suppose that four different ones of these hybrids (four of each number) be planted in two soils equally bad in respect to chlorosis, but different in other ways; it will happen nearly always that they develop in more or less unequal manner in each of these soils, so that the most vigorous of the four in one of the soils may be the most feeble in the other.

It appears to me, then, indispensable, when the question comes up of reconstituting a soil subject to chlorosis, to make a preliminary trial with several kinds of these grafting stocks, and not to choose definitively this one, or those which will have to serve in the reconstitution, until after the first, or even the second year of grafting. It is not a matter only, in fact, of finding a grafting stock sufficient for a difficult soil, but of choosing that one which will give there the best results.

It remains for me to say a few words on the vigor of these plants, their growth by cuttings, and on their grafting. As for their vigor, I can say without fear of being contradicted by the numerous visitors who have seen these hybrids at M. de Grasset's, that it is truly phenomenal. I measured, a few days ago, some of the mother stocks, raised from seed in 1883, and planted by M. de Grasset in 1884, at his country seat at Laval, near Pézenas, in a deep, pebbly-clay soil, of medium quality. Here is, in inches, the measure of these stocks, at the level of the ground:

No. 33. Three mother stocks, taken at random. The respective circumferences are found to be 11, 12, and 13 inches; say, at an average, a little more than 12 inches.

No. 139. Three mother stocks, also taken at random. Have measured, respectively, 11, 12, and 15 inches; say, at an average of 13.26 inches in circumference.

*In all cases the determination of the quantity of limestone has been made upon fine land, either upon the soil or subsoil. These determinations are due to the kindness of my colleague, M. Gayon, Professor of the Faculty of Sciences at Bordeaux.

No. 143. Two mother stocks. Measured 13.6 and 14.4 inches; that is to say, at an average of 14 inches.

No. 160. Three mother stocks. Measured, respectively, 13.2, 14.4, and 15.2 inches in circumference; that is to say, at an average of nearly 14.4 inches.

The growth by cuttings is not under 80 per cent, and easily attains 90 per cent.

The grafting of cutting upon cutting has not yet been tried, but it does not seem that it ought to present the least difficulty.

As to grafting upon the rooted vine in place, it gives, certainly, results superior to those the best grafting stocks give. In 1890 and 1891 M. de Grasset grafted as well in l'Aude as in l'Hérault, more than fifty thousand of these hybrids with a result of 95 per cent. At this time these grafts seem to be respectively one year older than they really are. The grafting of 1890 gave that year a good quarter of an ordinary harvest. A very great number of stocks bore one dozen bunches of grapes; twenty and twenty-four have been counted upon some of them, and even as many as thirty.

As the greater part of these plants have deep roots, one might believe that they are imperfectly adapted to soils which have not much depth. It is nothing of the kind, as I am sure. When the roots arrive at the impenetrable subsoil, they change their direction and become horizontal, as do the tap-roots of the pines upon the heath. Many of our experimental fields (that of M. Bethmont, notably) have only 5.8 inches of arable soil upon a subsoil absolutely impenetrable, and that does not prevent many of our hybrids from vegetating there with more vigor, even than did formerly the *Folle Blanche*, or the traditional varieties of the country.

Experience has taught us that in general all the selected plants belonging to the same hybridation (of the same number) have a resistance equally sensitive to chlorosis. Thus, for example, the seven plants which compose the numbers 33 A, A¹, A², A³, B, B¹, B², placed side by side in the same experimental fields, acted in a similar manner when the soil was homogeneous. The same for the other numbers. The only notable difference between plants of the same number, which came to light under these conditions, are differences of vigor; generally they are feeble.

All these hybrids are nearly insensible to mildew in the open vineyard, and have no need of treatment. Those of No. 143 alone, if placed in a nursery, will have need of one or two treatments, in the great years of mildew, like that we have just passed through.

I wished by these short notes to enlighten the public upon the principal properties of these new grafting stocks, and to prevent questions for information being asked to which it will be impossible for me to respond.

In closing, I will indicate, in a few words, the distinctive characteristics of each of these plants, so that every one may be sure of their identity:

No. 33. *Cabernet. Rupestris Ganzin*. Plants vigorous; upright in growth. Foliage a rather dark green. Leaves rather small, folded, creased, almost completely smooth on both sides and the edge. Wood slightly bent at the nodes; internodes short. Color chestnut, more or less light, often studded with little black specks, protuberant, consequently scabious.

Plants fertile, but straggling. Leaves, in color, usually unchanged in the autumn. Bunches of grapes small, A³. Bunches attaining almost 6 inches in length. Leaves sometimes very slightly spotted with red, B².

Plants sterile. Leaves more or less colored in the autumn season.

* Aspect, slightly trailing. Internodes attaining about 6 inches in length, B¹.

* Aspect, *subérigé*. Internodes not exceeding 4½ inches in length.

** Upper leaves entire, or slightly lobed, A¹.

** Upper leaves 3-5 lobes.

Upper leaves rather 3 than 5 lobes, A².

Upper leaves deeply lobed 3-5, B.

Upper leaves 5 lobes, most often uncolored in the autumn, A.

No. 139. *Alicante Bouschet. Rupestris*. Plants very vigorous, upright appearance. Foliage a beautiful green, rather glaucous, greasy. Leaves round, a little folded or creased, edge patulous, reflected. Wood large, flat, with a longitudinal groove on one side, internodes short, color hazel, more or less dark, the largest ornamented by longitudinal bands, darker in color, which begin at the insertion of the leaves.

Plants fertile, very straggling. Leaves not at all or only a little colored with red in the autumn, A².

Plants sterile.

* Leaves slightly or not at all colored in the autumn.

* Leaves always more or less colored in the autumn.

** Highly colored. Veins almost unbearded on the underside, edge unbearded, B.

** Color ordinary.

Upper leaves slightly lobed 3-5, edge of the lower leaves slightly pubescent, A.

Upper leaves entire, the lower with smooth edge, B².

No. 143. *Aramon. Riparia*. Plants very vigorous, aspect trailing. Foliage of very light color. Leaves large in general, heart-shaped. Wood straight, of light color, smooth. Internodes of medium length.

Leaves spotted with red in the autumn. Plants very straggling, A².

Leaves never spotted with red.

* Plants fertile, A.

* Plants sterile.

** Internodes attaining 5.8 and 6.2 inches in length. Full-grown leaves almost completely unbearded, edge unbearded, B².

** Internodes reaching only 4.6 inches in length. Plants almost absolutely unbearded. At the very most, a few awl-shaped hairs at the axil and under the large veins of the old leaves. Edge of the leaf unbearded, B¹.

Plant presenting woolly hairs, rather frequent at the extremity of the shoots, upon the young leaves and tendrils. Old leaves notably pubescent and even woolly, especially underneath them, upon the veins. Edge of the leaf very slightly woolly and pubescent, A¹.

No. 160. *Gros Colman. Rupestris*. Plants extremely vigorous, aspect upright and trailing. Foliage rather deep green, slightly glaucous. Leaves broad, rounded, entire, or almost entire. Wood large, color hazel, internodes of medium length. Plants all sterile.

Leaves without the least coloration of red in the autumn, completely smooth on the lower side, and even on the edge, A.

Leaves do not turn red in autumn, or only very slightly so; pubescent upon the large veins of the lower surface, also on the edge, 3-5 lobes, A.

Leaves highly colored with red, pubescent upon the large veins, on the lower surface, also on the edge; internodes attaining 0.78 inches more in length than the preceding plant, B.

All these diagnoses have been made in the south the last of September, upon the mother stocks themselves.